ORDER No.MKW9703M312
B15 (U.S.A.)
B4 (CANADA, PUERTO RICO)

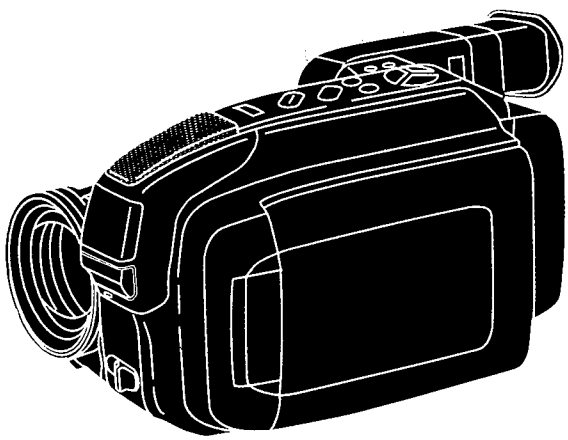
Service Manual

Compact VHS Camcorder

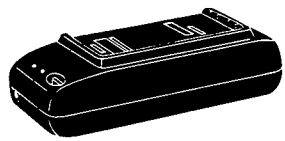
Panasonic® Palmcorder® VHS C

PV-L657
Consists of PV-L657D / PV-A17

PV-L757
Consists of PV-L757D / PV-A17



Models : PV-L657D
PV-L757D



Model : PV-A17

ITEM	SPECIFICATION	MODEL 1	MODEL 2
Power	Source : Compact VHS Camcorder : DC 6V Consumption : Compact VHS Camcorder : 6V DC 10W (Max. 13W)	○	○
Video Recording System	Head : 4 rotary heads plus flying erase head. helical scanning system Signal - to - Noise Ratio : SP : more than 43dB, SLP : More than 41dB Horizontal Resolution (Color / Monochrome) Recording : more than 300 lines, Playback : more than 230 lines	○	○
Audio	Head : Normal Mono : 1 stationary head MIC Input Level (M3 type) - 70dB Frequency Responce : Normal Mono : SP : 100Hz - 8kHz, SLP : 100Hz - 5kHz Signal - to - Noise Ratio : SP : more than 42dB, SLP : more than 40dB	○	○
Video Signal	EIA Standard (525 lines, 60 fields) NTSC color signal	○	○
Tape Speed	SP : 1 - 5 / 16 i.p.s. (33.35mm / sec), SLP : 7 / 16 i.p.s. (11.125mm / sec) Record / Playback Time : SP : Max. 40min, SLP : Max. 120min, with TC-40 Tape FF Time : Less than 8min. 14sec. (TC-40 Tape) REW Time : Less than 8min. 19sec. (TC-40 Tape)	○	○
Tape Format	Tape width 0.5inch (12.7mm) high density tape	○	○

1. PV-L657D (Compact VHS Camcorder)
2. PV-L757D (Compact VHS Camcorder)

Designs and Specifications are subject to change without notice.
(Please see reverse side.)

Panasonic®

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians.
Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

(Continued from cover page)

ITEM	SPECIFICATION	MODEL 1	MODEL 2
Operating Condition	32° F (0°C) ~ 104° F (40°C) (Temperature) 10% ~ 75% (Humidity)	○	○
Pick-up Device	One integral color filter Charge Coupled Device (CCD)	○	○
Lens	16 : 1 Power Zoom Lens F1 : 1.6 with auto iris control Focal length : 5.3mm - 84.8mm Power zoom function Lens filter diameter : 58mm	○	○
Electronic Viewfinder	0.5 inch (12.7mm) Electronic Viewfinder 0.5 inch (12.7mm) Liquid Crystal Color Electronic Viewfinder	○ —	— ○
LCD Monitor	3.2 inch (81.2mm) Liquid Crystal Display	○	○
Minimum Illumination Required	0.8 lx (F1 : 1.6) 0.08 footcandles 5 lx (F1 : 1.6) 0.5 footcandles (EIA Standard)	○	○
Dimension	4-7/8 inch (125mm) (W) X 4-5/8 inch (116mm) (H) X 7 inch (177mm) (D)	○	○
Weight	Approx. 2.7 lbs (1.20kg)	○	○

1. PV-L657D (Compact VHS Camcorder)
2. PV-L757D (Compact VHS Camcorder)

Weight and dimensions shown are approximate.

Regarding the Service Manual of the AC Adaptor for models PV-A17, please refer to the Service Manual / Order No. MKW9512M302.

COMPARISON CHART
OF MODELS & MARKS

MODEL No.	MARK
PV-L657	A
PV-L757	B

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IMPORTANT SAFETY NOTICE

THERE ARE SPECIAL COMPONENTS USED IN THIS EQUIPMENT WHICH ARE IMPORTANT FOR SAFETY. THESE PARTS ARE MARKED BY ⚠ IN THE SCHEMATIC DIAGRAM, CIRCUIT BOARD LAYOUT, BLOCK DIAGRAM, EXPLODED VIEWS AND REPLACEMENT PARTS LIST. IT IS ESSENTIAL THAT THESE CRITICAL PARTS SHOULD BE REPLACED WITH MANUFACTURER'S SPECIFIED PARTS TO PREVENT X-RADIATION, SHOCK, FIRE, OR OTHER HAZARDS. DO NOT MODIFY THE ORIGINAL DESIGN WITHOUT PERMISSION OF MANUFACTURER.

I Safety Precautions

GENERAL GUIDELINES

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1MΩ and 5.2MΩ. When the exposed metal does not have a return path to the chassis, the reading must be ∞.

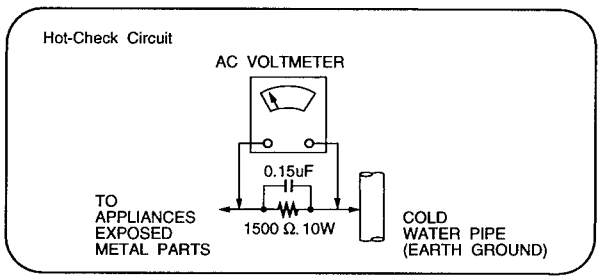


Figure. 1

LEAKAGE CURRENT HOT CHECK(See figure 1.)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5kΩ, 10 watts resistor, in parallel with a 0.15u F capacitor, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester(Simpson Model 229 or equivalent)may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

PREVENTION OF ELECTRO STATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly epuipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static(ESD protected)" can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it.(Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity(ESD)sufficient to damage an ES device).

X-RADIATION

WARNING :

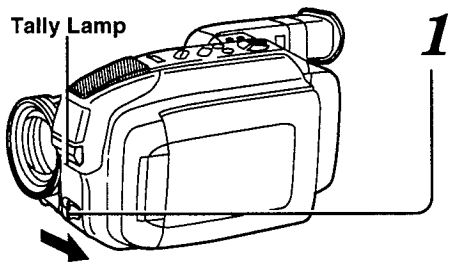
1. The potential source of X-Radiation in EVF sets is the High Voltage section and the picture tube.
2. When using a picture tube test jig for service, ensure that jig is capable of handling 10kV without causing X-Radiation.

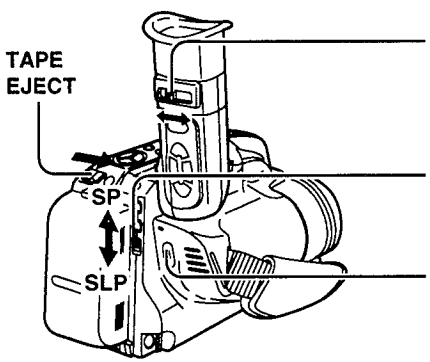
NOTE : It is important to use an accurate periodically calibrated high voltage meter.

3. Measure the High Voltage. The meter (electrostatic type) reading should indicate 2.5kV, ±0.15kV. If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure. To prevent an X-Radiation possibility, it is essential to use the specified picture tube.

Camera Recording

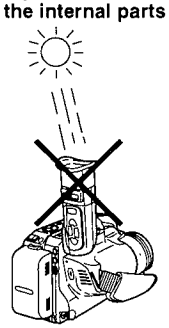
Simple Recording





WARNING:

- **Do not leave the Palmcorder with the EVF aimed directly at the sun as this may cause damage to the internal parts of the EVF.**

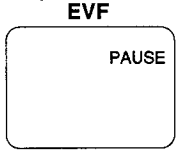


- When your Palmcorder is aimed at excessively bright objects, or bright lights, a vertical bar may appear in the picture. This is a normal characteristic of the CCD pick-up device. Try to avoid this when possible.

Before you begin...

- **Connect the Palmcorder to a power source.**
- **Insert a cassette with record tab.**

1 Set the POWER switch to CAMERA.
The built-in Lens Cover opens.

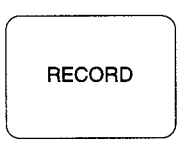


Record/Pause mode.

2 With the Viewfinder Eye Cup against your eye, adjust the Vision Adjustment Control to your eyesight.

3 Slide the TAPE SPEED Selector to SP or SLP.

4 Press RECORD/PAUSE to start recording.
The Tally Lamp and REC Indicator are lit during recording.



Press the RECORD/PAUSE again to pause the recording.

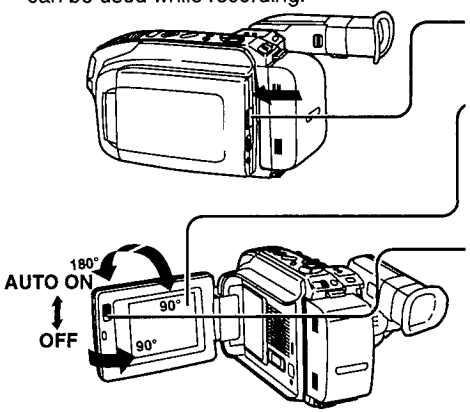
Set the Power switch to OFF after recording is finished.

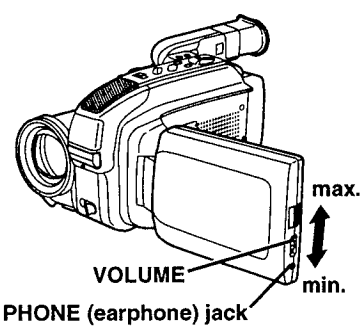
• To remove the cassette

In Record/Pause mode, slide the TAPE EJECT switch.

Using the LCD Monitor

The LCD (Liquid Crystal Display) monitor can be used while recording.





Before you begin...

- **Connect the Palmcorder to a power source.**

1 Press the LCD-OPEN button to unlock the LCD monitor.

2 Swing the LCD monitor fully open and adjust the angle.
- Rotating the LCD monitor while it is only partially open may block the cassette door and cause damage to the Palmcorder body.

3 LCD AUTO ON
- Set the LCD-POWER switch to AUTO ON. The LCD monitor will then turn on/off according to the Palmcorder's POWER switch setting. When the LCD monitor is turned ON, the Viewfinder automatically turns OFF.
- If the LCD monitor is rotated 180° to face the same direction as the lens/subject, the Viewfinder turns back on allowing both you and the subject to monitor the recording.

LCD POWER OFF
- Set the LCD-POWER switch to OFF to have Viewfinder on only.
- When the LCD monitor is completely closed, it will shut off automatically to save power even if the LCD-POWER switch is left on.
- When the LCD monitor turns off, the Viewfinder turns on automatically.

4 Start recording.

Note:
- Using the LCD monitor reduces battery operating time.
- You cannot monitor the sound from the speaker during recording. Connect the earphone (M3 type, not supplied) to PHONE (earphone) jack and adjust the volume of the earphone using the VOLUME control.
- Close the LCD monitor completely when not in use.

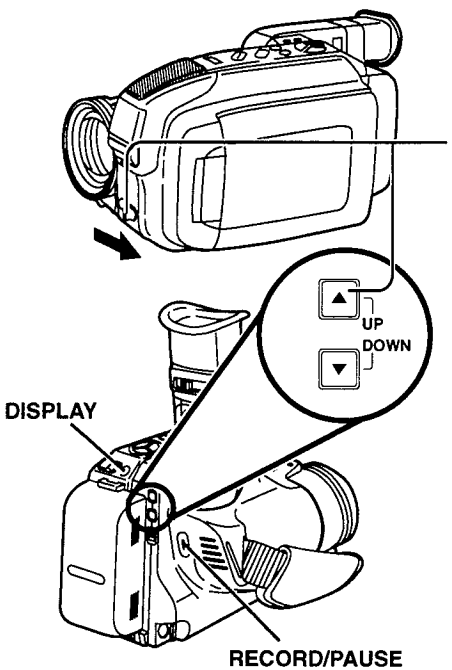
Camera Recording

Stand-by Quick Release

Whenever the Palmcorder is left in RECORD/PAUSE mode for 5 minutes, it will automatically switch to Stand-by mode to conserve energy. Activating the Stand-by Quick Release feature allows you to release the Stand-by mode and resume recording by simply pressing the RECORD/PAUSE button. If this feature is not activated, it is necessary to turn the Palmcorder OFF and back on to CAMERA to start recording again. The default setting from the factory is set to the NON-ACTIVE mode.

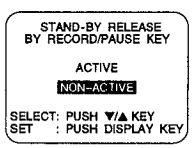
Before you begin...

- **Connect the Palmcorder to a power source.**
- **Insert a cassette with record tab.**



1 **Continue holding down the UP ▲ button before and after turning the POWER switch to CAMERA** until the STAND-BY RELEASE menu screen is displayed.

2 **Press UP ▲ or DOWN ▼ to select ACTIVE or NON-ACTIVE.**



ACTIVE

You can resume recording from Stand-by mode by pressing the RECORD/PAUSE button.

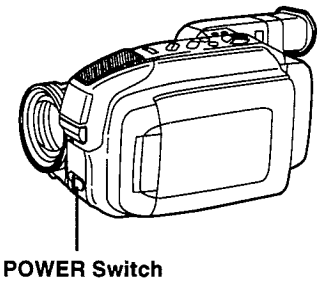
NON-ACTIVE

You must set the POWER switch to OFF, and then to CAMERA to release the Stand-by mode.

3 **Press DISPLAY** to set your selection and exit this screen.

Easy Edit Stand-by

If you stop recording but plan to resume within 24 hours, use the Edit Standby feature to make a smooth transition between scenes.



1 **Press RECORD/PAUSE while recording.**

2 **Set the POWER switch to OFF** and leave the cassette in the Palmcorder.

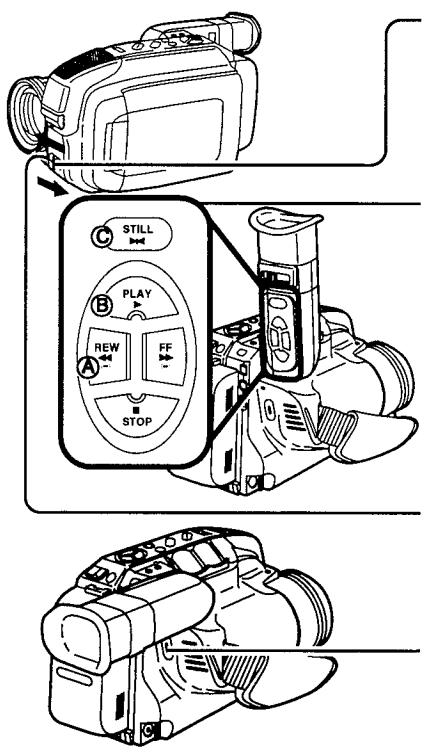
3 When ready to resume recording, **set the POWER switch to CAMERA and press RECORD/PAUSE.**

Note:

- If it is going to be longer than 24 hours before you resume recording, you will need to use the manual Easy Edit feature described below.

Manual Easy Editing

For proper continuity when taping from the Stop mode, or after changing the Battery Pack.



1 **Set the POWER switch to VCR.**

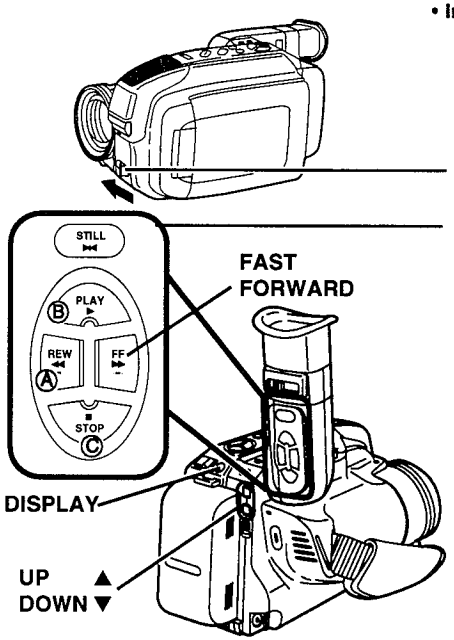
2 Ⓐ **Press REWIND/SEARCH** to go back a few seconds on the tape.
Ⓑ **Press PLAY** to review the picture on the Viewfinder.
Ⓒ **Press STILL** at the location you wish to continue your recording.

3 **Set the POWER switch to CAMERA.**

4 **Press RECORD/PAUSE** to continue recording.

Play Back your Recordings

Playback using the EVF



Before you begin...

- **Connect the Palmcorder to a power source.**
- **Insert a recorded cassette.**

1 **Set the POWER switch to VCR.**

2 Ⓐ **Press the REWIND/SEARCH button** to rewind the tape.
Ⓑ **Press PLAY** to start playback.
Ⓒ **Press STOP** to stop playback.

Auto Play

When the POWER switch is set to VCR, playback will automatically begin if the record tab has been removed on the cassette.

Search Speed

Standard Play (SP) Search is about 3 times the normal speed, and Super Long Play (SLP) Search is about 9 times the normal speed.

Special Effects Playback

To rapidly locate a scene

Press FAST FORWARD/SEARCH or REWIND/SEARCH for rapid visual search. Press again, or press PLAY to resume normal speed.

View a Still Picture

Press STILL to freeze the picture.
Press again to resume normal playback.

Note:

- During search playback, horizontal noise bars will appear and there will be no audio.
  To protect the tape and the video heads, your Palmcorder's operating modes will revert as follows:
  STILL ⟶ STAND-BY after 5 minutes.
  STANDBY ⟶ POWER OFF after 5 minutes when using a Battery Pack.
  When the tape reaches its end during playback, or fast forward, it will rewind automatically.

Tracking Control

Auto Tracking

Continuously analyzes the signal of each recording for optimum picture quality.

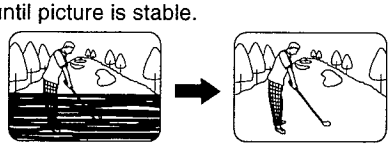
Manual Tracking

To minimize the noise in some recordings, manual tracking may be necessary.

For Noise in Playback mode:
Press UP ▲ or DOWN ▼ until picture clears.
Press DISPLAY to return to Auto Tracking.

For Noise in Still mode:
Press UP ▲ or DOWN ▼ until picture clears.

V-Lock Control (Reduces jitter in Still mode.)
Press DISPLAY and UP ▲ or DOWN ▼ until picture is stable.

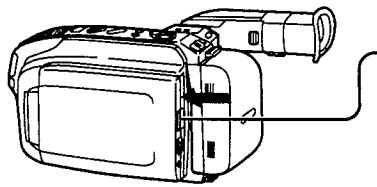


Playback using the LCD Monitor

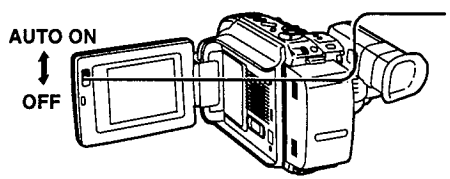
You can also use the LCD monitor to playback your recording.

Before you begin...

- **Connect the Palmcorder to a power source.**
- **Insert a recorded cassette.**
- **Set the POWER switch to VCR.**

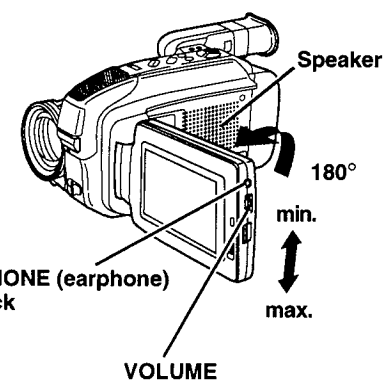


1 **Press the LCD-OPEN button** to unlock the LCD monitor and swing open.



2 **Set the LCD-POWER switch to AUTO ON.** The LCD monitor will then turn on/off according to the Palmcorder's POWER switch setting.

- When the LCD monitor is turned ON, the Viewfinder automatically turns OFF.
- When not in use, close the LCD monitor. (Faces inward)

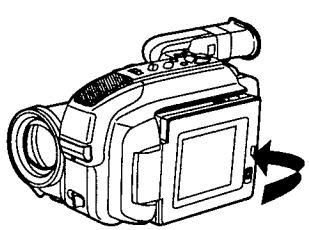


3 **Playback the tape.**

- Adjust the volume of the speaker or earphone (if connected) using the VOLUME control.

4 **Set the LCD-POWER switch to OFF** to have Viewfinder on only when viewing is finished.

- When the LCD monitor is completely closed, it will shut off automatically to save power even if the LCD-POWER switch is left on.
- When the LCD monitor turns off, the Viewfinder turns on automatically.



Note:

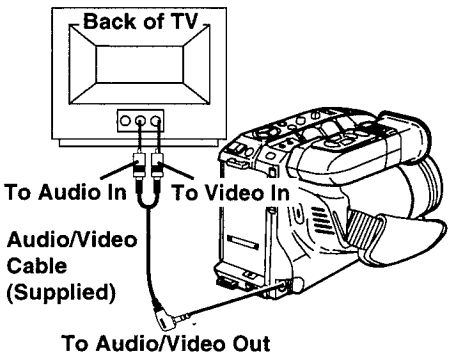
- Using the LCD monitor reduces battery operating time.
- If you connect the earphone (M3 type, not supplied) to PHONE (earphone) jack, the sound from the speaker will be muted.

Play Back your Recordings

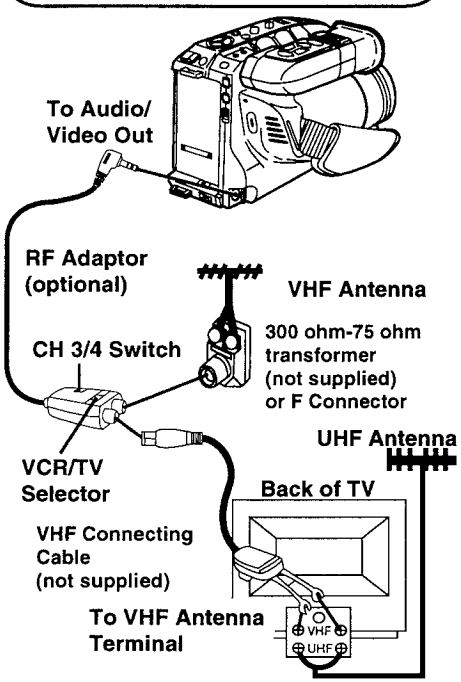
TV Playback or Viewing

Your Palmcorder may be connected to a TV to play back tapes or to view what you are recording.

TV with AUDIO/VIDEO IN Jacks.



TV without AUDIO/VIDEO IN Jacks.



Before you begin...

- **Connect the Palmcorder to a power source.**

1 **Set the POWER switch to VCR** for tape playback.
Or, set to CAMERA to view what your Palmcorder is recording.

2 **Turn the TV ON and set it to LINE INPUT.**
Check your TV operating instructions.

Note:
If your TV has no VIDEO or AUDIO IN jacks, select CH 3 or 4 on your TV to match the CH 3/4 switch setting on the OPTIONAL PV-RF16 RF Adaptor. Set the VCR/TV selector on the RF Adaptor to VCR for playback.

3 **Start playback or begin a recording.**

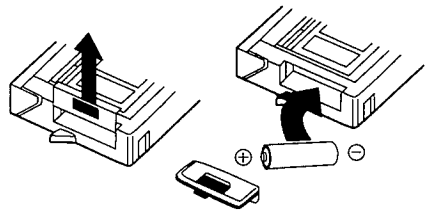
If you have connected the Palmcorder to your TV using the PV-RF16 RF Adaptor and want to watch TV only:

Set the POWER switch to OFF on the Palmcorder.
Then, set the VCR/TV Selector on the RF Adaptor to TV.
Now, turn the TV ON and select a channel.

CATV System Installer
This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC in USA (and to the Canadian Electrical Code in Canada) that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Play Back your Recordings in your VCR

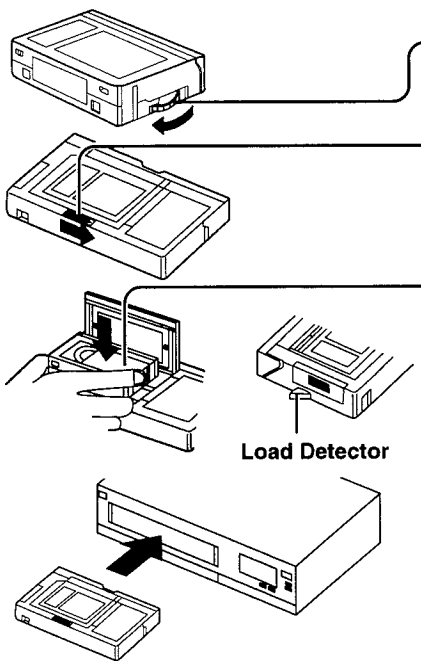
Playback using the PlayPak



Remove the Battery Compartment lid and insert the AA size battery.

- Make sure polarities are aligned properly.
- When tape loading and unloading time becomes longer than normal, battery replacement is necessary.

Insert VHS C Cassette



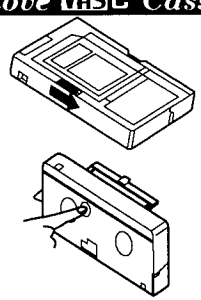
1 **Turn the Tape Wheel on the VHS C cassette in the direction of the arrow** to take up any slack.

2 **Slide the RELEASE button in the direction of the arrow** to open the PlayPak door.

3 **Insert the VHS C cassette** with the window facing up and to the left.
Then, snap the lid shut.

- Be sure the cassette reel area under the PlayPak is free to turn while loading.
- Allow the Load Detector to fully retract before using the PlayPak in your standard VHS VCR.

Remove VHS C Cassette

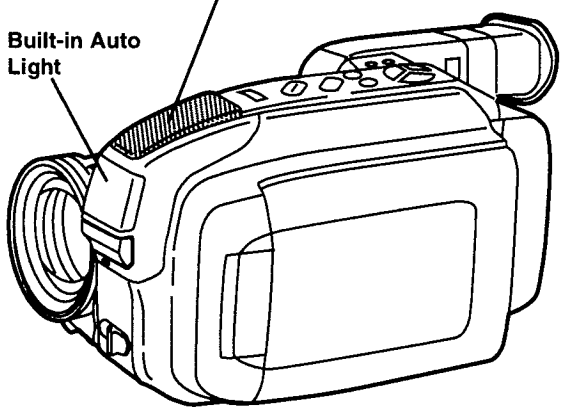


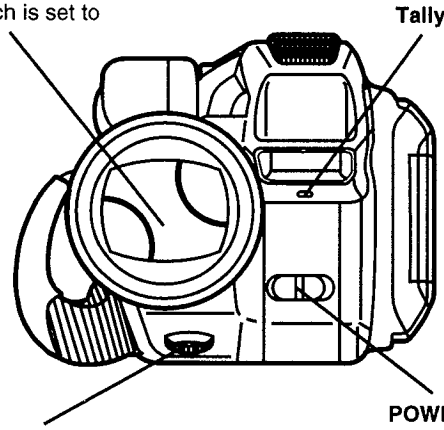
1 **Slide the RELEASE button** and wait for the lid to open.

2 **Hold the PlayPak securely in one hand.** Using your finger, reach through the hole in the bottom of the PlayPak Adaptor and push the tape out the top.

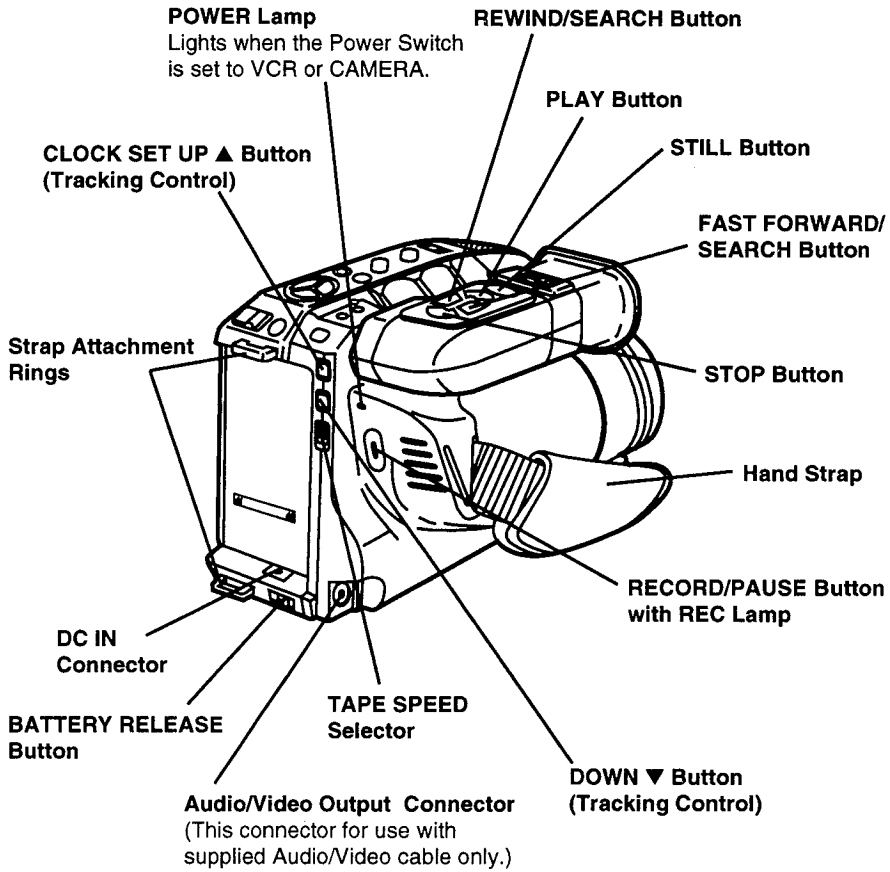
Index of Controls

Front View

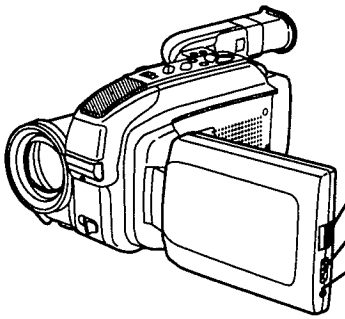




Rear View



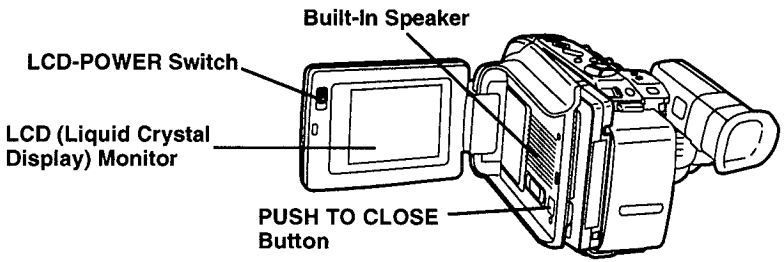
Index of Controls



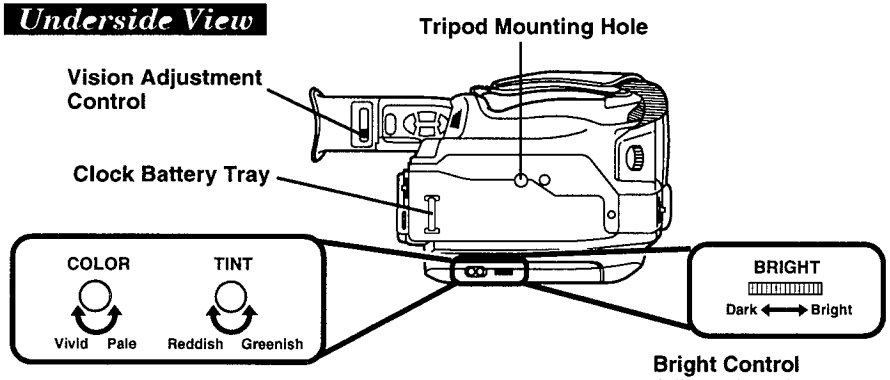
LCD-OPEN button

Volume Control

Earphone Jack (Monaural)
Connect the earphone (M3 type, not supplied) to the earphone jack for monitoring the sound during playback or recording.



Underside View



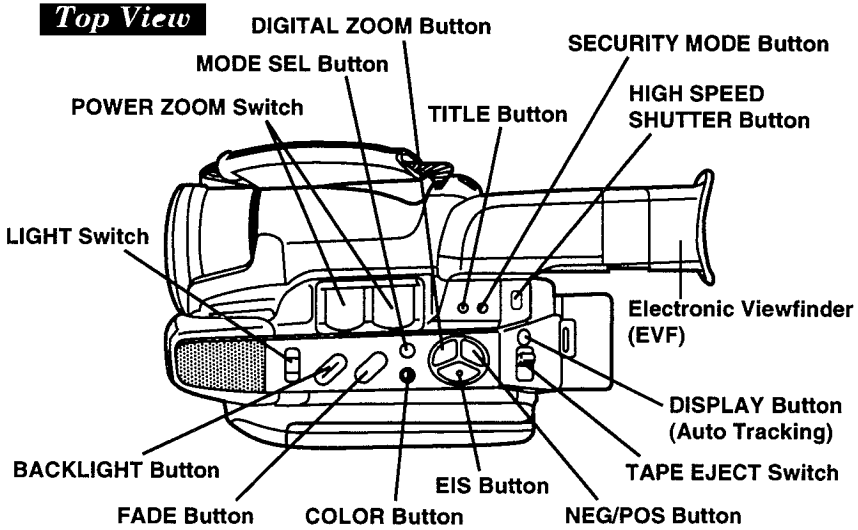
***Tint Control**
Adjusts the tint for natural fleshtones.

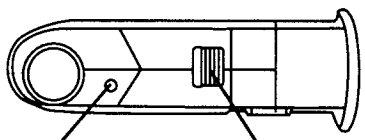
***Color Control**
Adjusts the color intensity.

Bright Control
Adjusts the brightness of the picture.

***Note:** These controls have been set at the factory. It is not necessary to adjust these controls under normal circumstances. But, should it become necessary, be careful to make the adjustment with a small, slender screwdriver so as not to damage the miniature control.

Top View



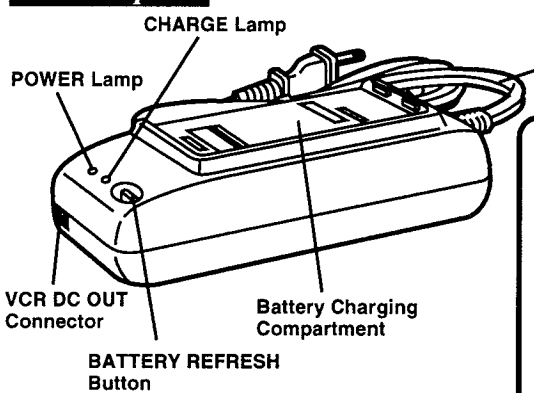


***Bright Control**
Adjust the brightness of the picture.

EYEPIECE RELEASE button

***Note:** This control has been set at the factory. It is not necessary to adjust this control under normal circumstances. But, should it become necessary, be careful to make the adjustment with a small, slender screwdriver so as not to damage the miniature control.

AC Adaptor



CAUTION:
This unit will operate on 110/120/220/240V AC. An AC plug adaptor may be required for voltages other than 120V AC. Please contact either a local or foreign electrical parts distributor for assistance in selecting an alternate AC plug. We recommend using the accessory power plug adaptor (VJSS0070) in an area which has special AC outlets.

B. SERVICE NOTES AND CAUTIONS

A. EXTENSION CABLES FOR SERVICE

Use the following extension cables when checking and servicing the unit.

COMPARISON CHART OF MODELS & MARKS

MODEL No.	MARK
PV-L657	A
PV-L757	B

Note : 1. When unplugging or plugging in connectors use extreme caution.
2. Use a grounded ESD wrist strap while disassembling the camera portion.

No.	PART NBR	PART NAME	CONNECTION
1	VUVS0007	12Pin Extension Cable	CCD Flexible Cable on the Camera Unit ~ FP8 on the Main C.B.A..
2	VFKW0084A	18Pin Extension Cable	Main C.B.A. on the FP2 ~Capstan Flexible Cable on the Mechanism Chassis.
3	VFKW0117B	18Pin Extension Cable	Main C.B.A. on the FP5 ~Cylinder Flexible Cable on the Mechanism Chassis.
4	VFKW0124A	14Pin Extension Cable	Main C.B.A. on the FP1 ~ A/C Head Flexible Cable on the Mechanism Chassis.
5	VUVS0008	21Pin Extension Cable	Top Connector Unit Flexible Cable ~ FP3 on the Main C.B.A..
6	VEQW0261	Side L Connector Unit	Top Connector Unit ~ Side L Connector Unit.
7	VJHW0053W	Battery Catcher Unit	Main C.B.A. on the B2 ~ Battery Catcher Unit.

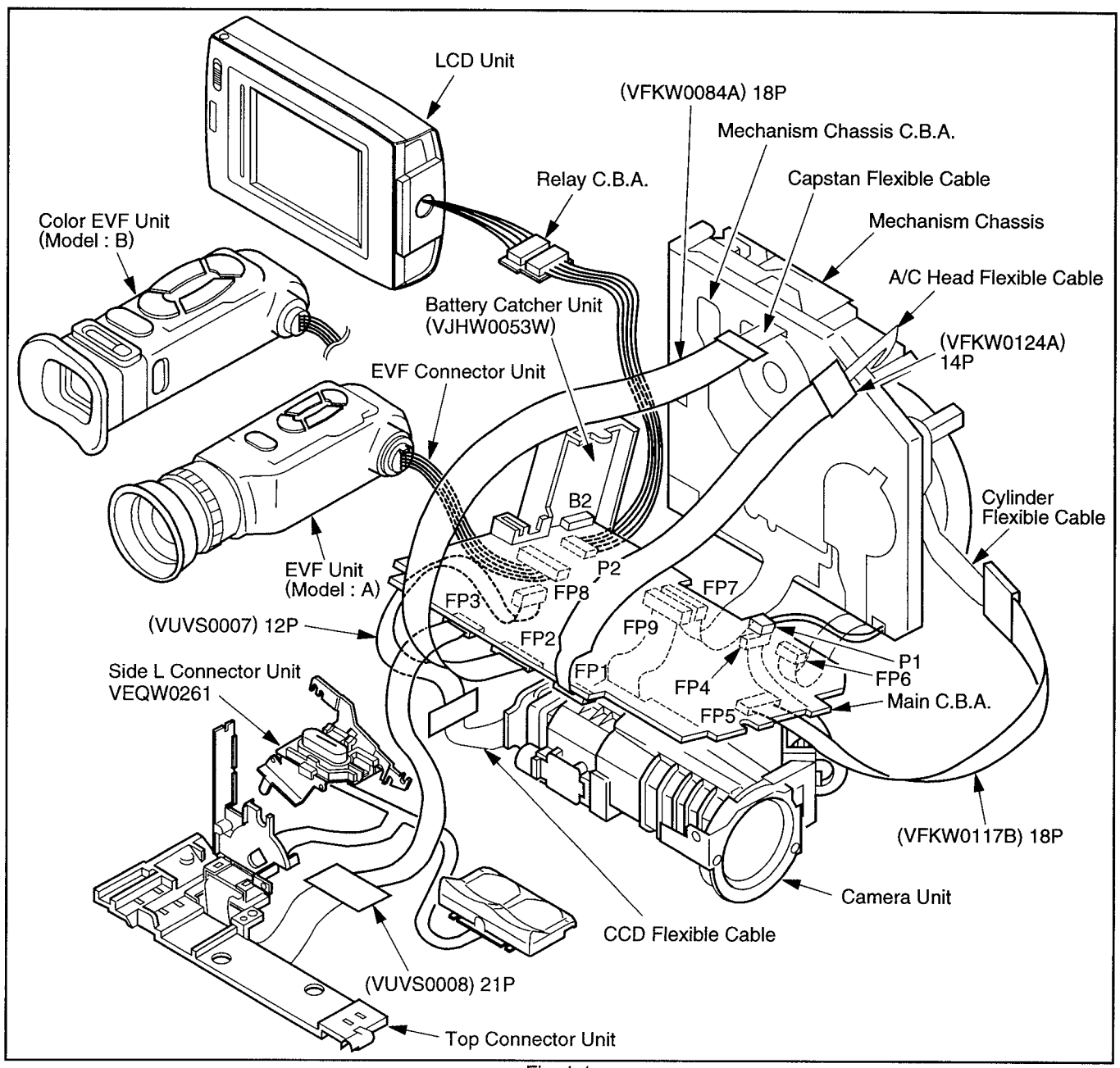


Fig. 1-1

INTERCONNECTION OF EXTENTION CABLES

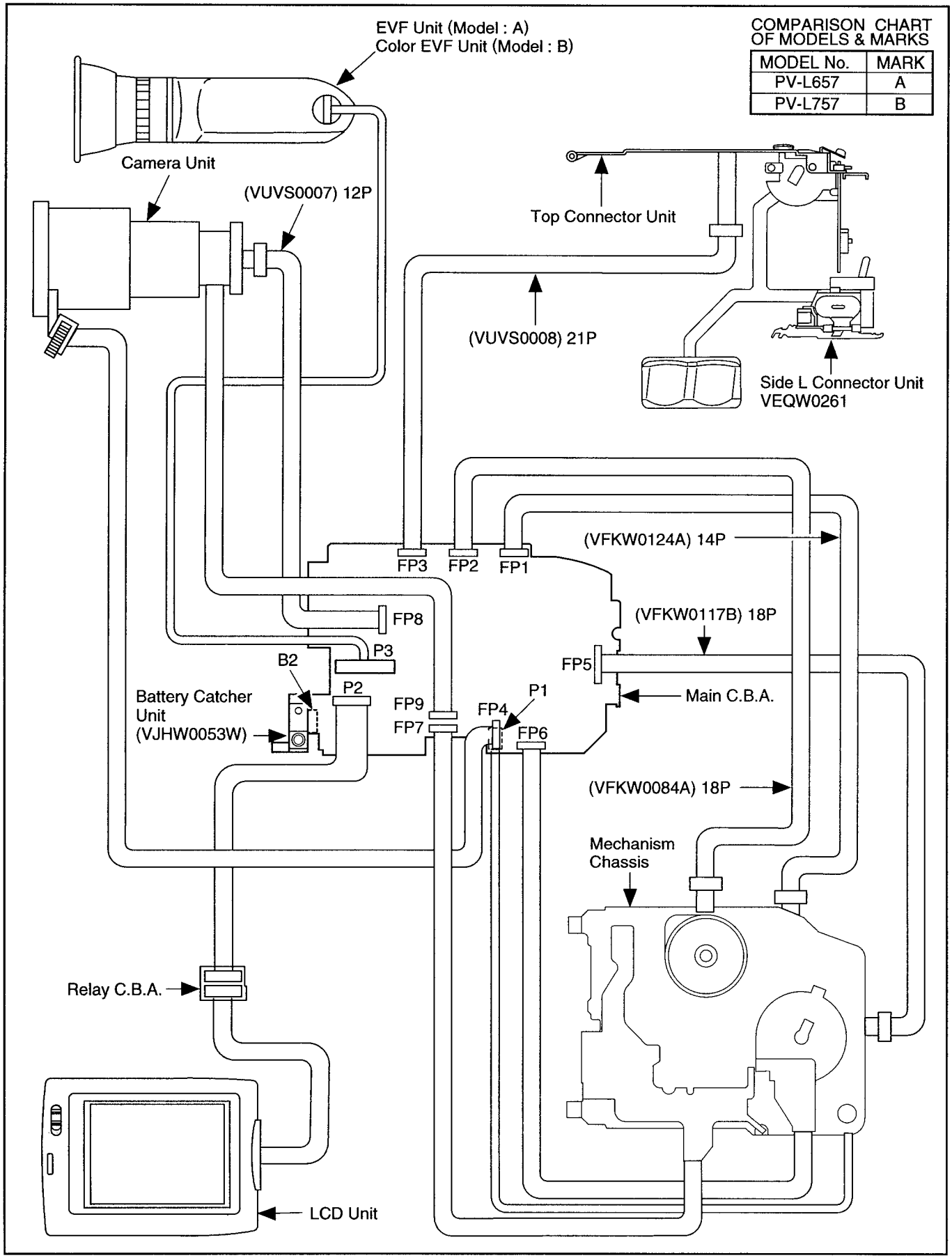


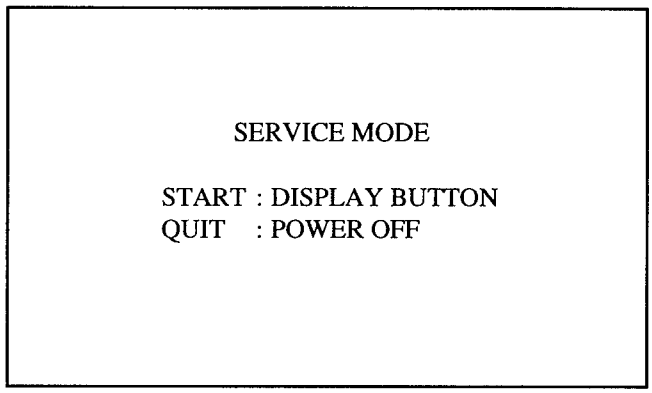
Fig. 1-2

B. SERVICE MODE SPECIFICATION (SELF-DIAGNOSTIC SYSTEM)

Operation : a. Wake-up : Press and hold all of the Display, REC., and Stop buttons over 2 seconds, the unit gose into the self-diagnostic mode and main menu appears.
b. Mode Selection : Press display button to change and select self-diagnose mode.
c. Close : Turn off the Power Switch.

Display : Following descriptions can be displayed on E.V.F. and TV monitor at the same time.

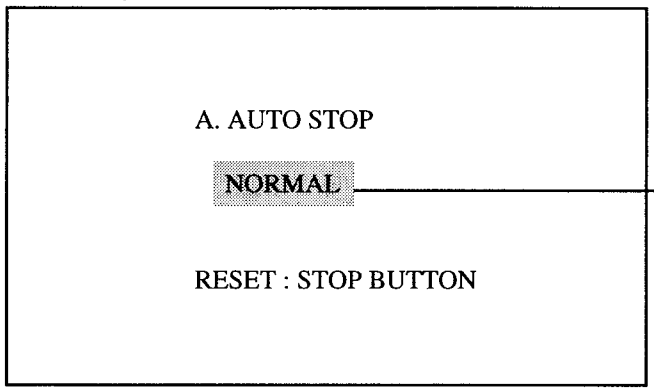
1. Main Menu



Press and hold all of the Display, REC and Stop buttons over 2 seconds. The Main Menu appears on E.V.F. and TV monitor.

DISPLAY BUTTON

2. Auto Stop



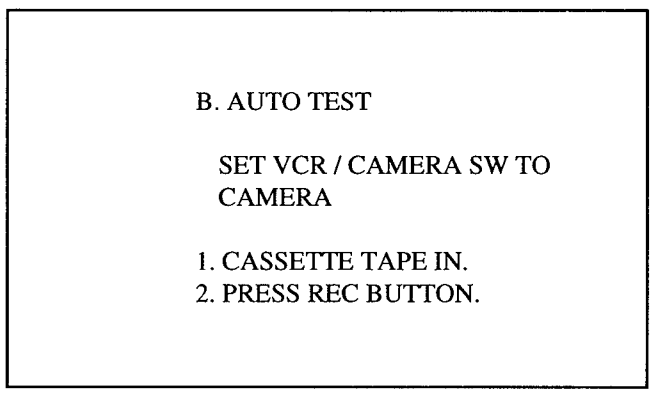
When the unit suddenly shuts off, It is possible to see the cause discription in this menu. Even if the AC adaptor or battery is disconnected, the most recent failure will be memorized. Pressing the Stop button at this time will reset the memory.

* LOADING LOCK **
CYLINDER LOCK
TAKEUP REEL LOCK
SUPPLY REEL LOCK
DEW
BATTERY UNDER CUT
STANDBY MODE

* Cause descriptions can be displayed until power shuts off.
** LOADING LOCK --- EJECT
STOP
STBY
REC / PB
(When it is possible to detect the lock position, loading lock position can be displayed.)

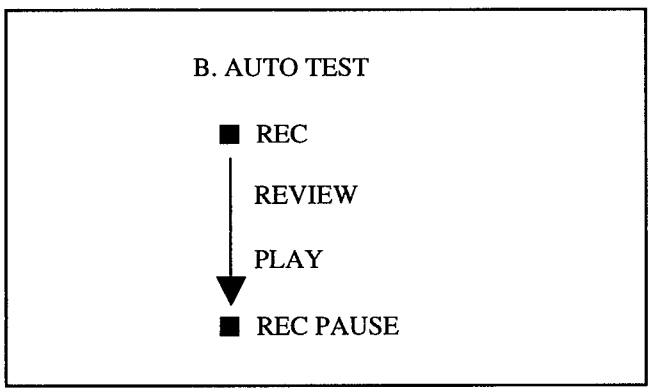
DISPLAY BUTTON

3. Auto Test



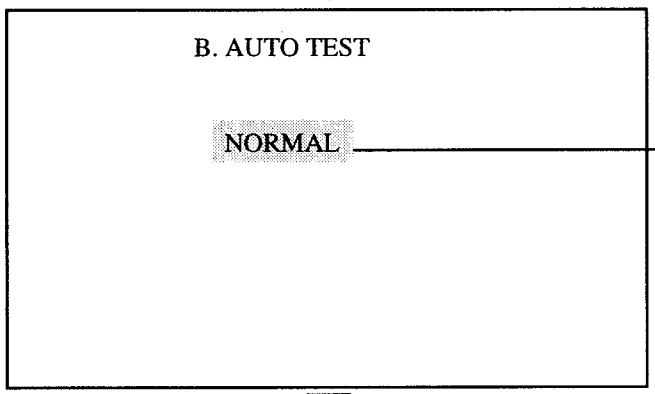
a. Cassette tape in and Press REC button.
b. The unit operates automatically on tests.

REC BUTTON



a. Automatically operates REC (30sec), REW, PLAY and STOP.
b. Displays the test status while auto test is progressing.
(■ Mark shows the test status.)

AUTO



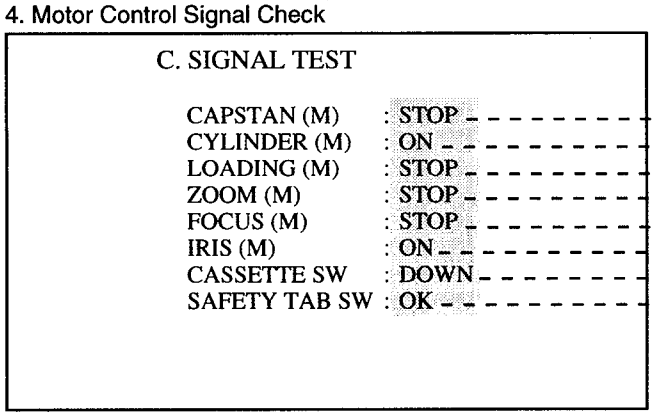
Displays the test result.

- LOADING LOCK **
- CYLINDER LOCK
- TAKEUP REEL LOCK
- SUPPLY REEL LOCK
- DEW
- BATTERY UNDER CUT

*Cause descriptions can be displayed until power shuts off.
** LOADING LOCK --- EJECT
STOP
STBY
REC / PB
(When it is possible to detect the lock position, loading lock position can be displayed.)

DISPLAY BUTTON

4. Motor Control Signal Check



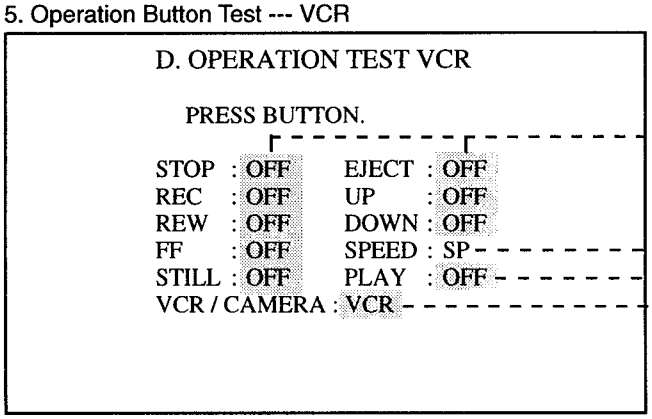
Displays all of motor drive signals and switch inputs from mechanism chassis.

- CAPSTAN (M): STOP --- FWD, REV
- CYLINDER (M): ON --- OFF
- LOADING (M): STOP --- FWD, REV
- ZOOM (M): STOP --- WIDE, TELE
- FOCUS (M): STOP --- FAR, NEAR
- IRIS (M): ON --- OFF*
- CASSETTE SW: DOWN --- UP
- SAFETY TAB SW: OK --- BRK

* : Iris No. display for analog model.

DISPLAY BUTTON

5. Operation Button Test --- VCR

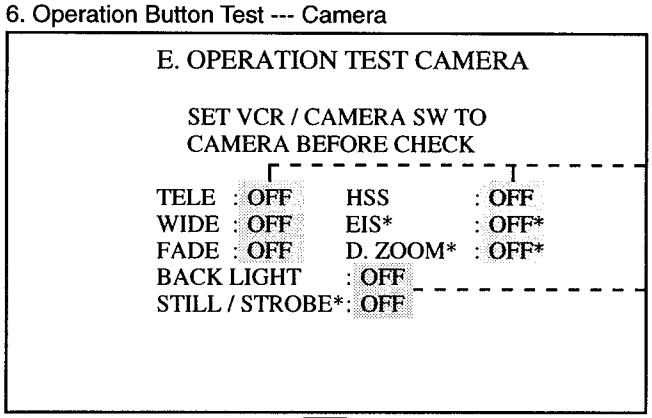


Tests connection of VCR operation buttons by pressing each button.

- PRESS BUTTON --- ON
- SPEED: SP --- SLP
- PLAY: OFF --- ON
- VCR / CAMERA: VCR --- CAMERA

DISPLAY BUTTON

6. Operation Button Test --- Camera

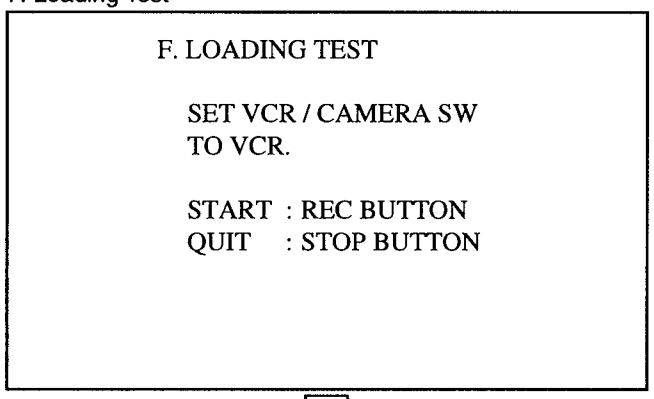


Tests connection of camera operation buttons by pressing each button.

* : Only for digital models.

DISPLAY BUTTON

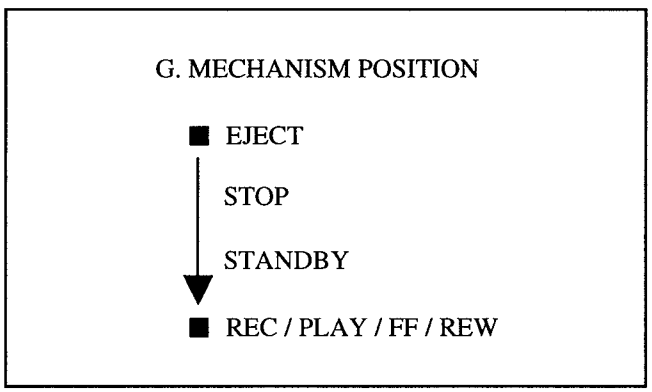
7. Loading Test



Repeats loading / unloading 10 times without tape to check loading mechanism.

DISPLAY BUTTON

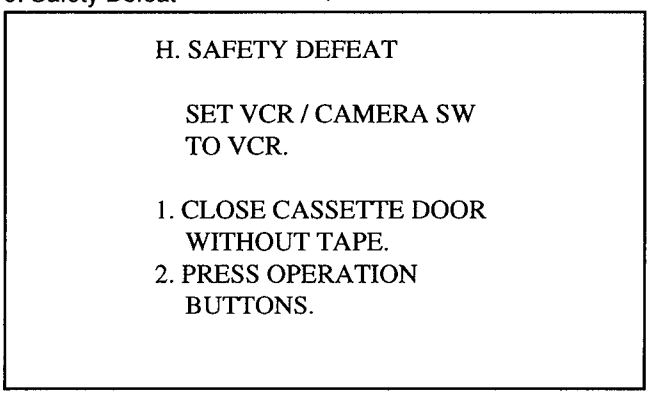
8. Mechanism Position



Displays mechanism position by monitoring mode switch.
(■ mark shows the test status.)

DISPLAY BUTTON

9. Safety Defeat



a. Defeats following safety functions. Cylinder lock, Reel lock, End of tape, Battery under cut, Safety tab switch.
b. It is possible to check mechanism movement without tape by pressing operation buttons in this mode.

DISPLAY BUTTON

10. Tracking Fix

I. TRACKING FIX

Functions to fix tracking position to its center for tape path alignment.

DISPLAY BUTTON

11. PG Shifter

J. PG SHIFTER

DATA: □□

UP : ▲ BUTTON

DOWN : ▼ BUTTON

Displays the adjustment data.

Function to adjust Head Switching Position (PG SHIFTER) by pressing up button and down buttons.
When adjusting the Head Switching Position (PG SHIFTER) with this function, do not need to use the EVR TOOL or Personal Computer.
To adjust with this function, need the oscilloscope only.

DISPLAY BUTTON

RETURNS TO MAIN MENU.

DISPLAY BUTTON

POWER OFF

AUTO STOP MODE

NORMAL OPERATION MODE

C. How to Remove a Jammed Tape

(1) Remove the LCD Unit as shown in "1. Disassembly of Cabinet Parts" as shown in Page III-1.

(2) Insert a small screwdriver to the TP Board slot on the rear side of the unit as shown in Fig. 2-1.

(3) Slide the Lock Lever using the small screwdriver to open the Cassette Cover as shown in Fig 2-1.

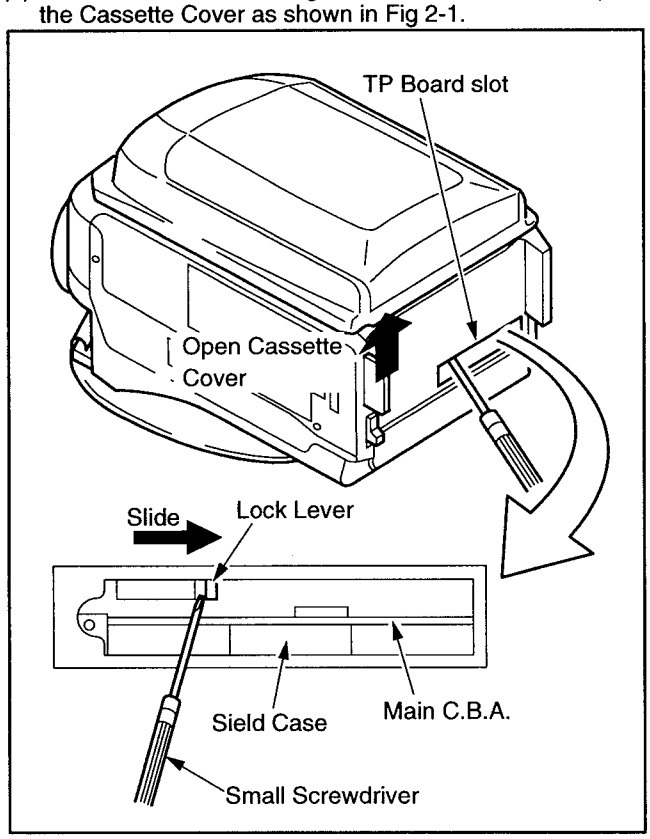


Fig. 2-1

(3) Remove the Cassette Cover by unlocking portions as shown in "1. Disassembly of Cabinet Parts" as shown in Page III-1.

(4) Close the Cassette Up Unit.

(5) Connect a DC Power Supply or Battery to the terminals of Loading Motor Unit as shown in Fig. 2-2 then adjust the voltage to 4.0 ± 0.1V DC to complete unloading operation sequence and eject the video cassete tape.

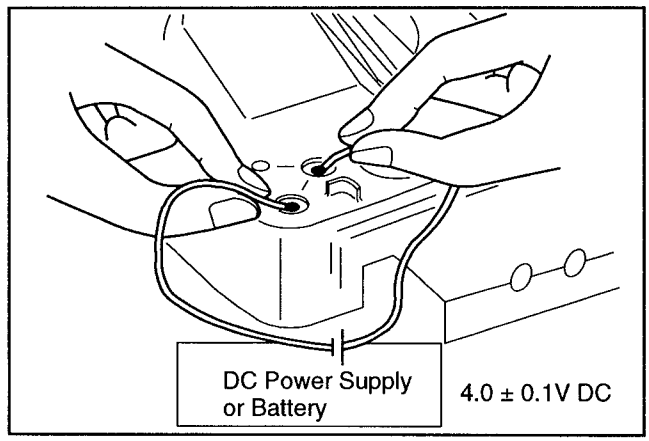


Fig. 2-2

Note : Do not apply DC voltage to the Loading Motor Unit when the cassette cover is opened.

COMPARISON CHART OF MODELS & MARKS

MODEL No.	MARK
PV-L657	A
PV-L757	B

(6) Remove tape slack by turning the takeup reel gear of the video cassette as shown in Fig. 2-3.

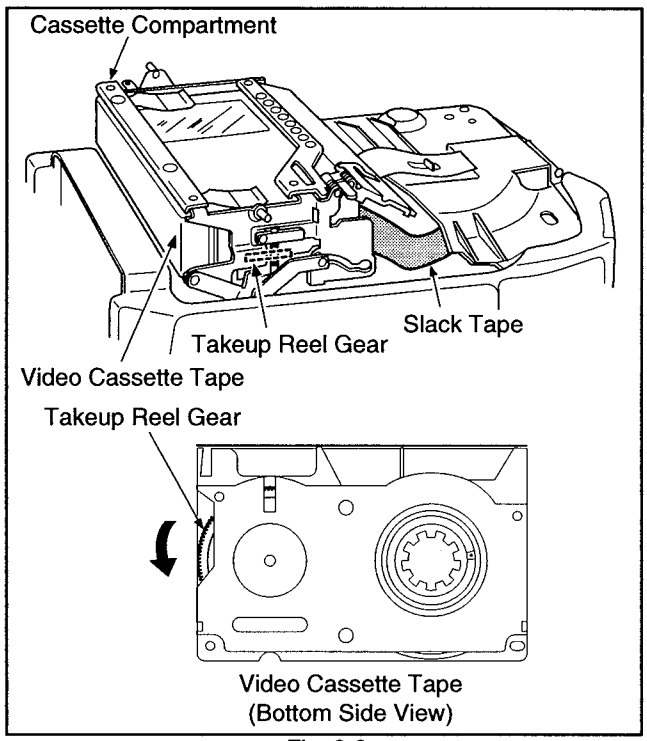


Fig. 2-3

(7) Remove the video cassette from the cassette up unit.

Note : Above method may cause a tape damage at a few portions of the video cassette tape.
If it is not permitted, remove tape slack using following method.

1. Open Cassette Cover a little.
2. Remove cabinet parts as shown in the "Disassembly Parts".
3. Turn the Capstan Rotor in Fig. 2-4 counterclockwise to wind the Tape slack.

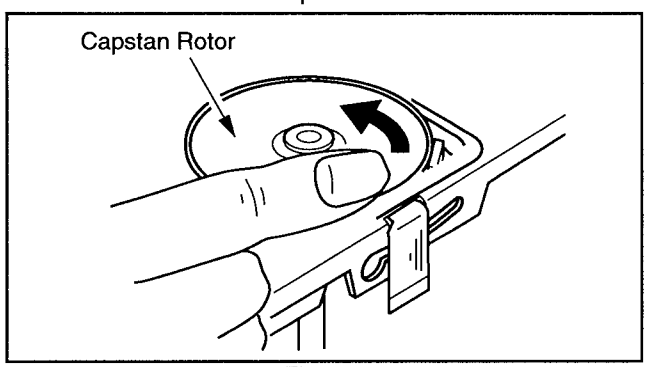


Fig. 2-4

D. How to access the Manual Tracking Control

Press the Clock set Up (Tracking Up) or Clock set Down (Tracking Down) button which is usually used for the Date/ Time setting to perform the Manual Tracking Adjustment in Playback Mode.

E. Connection of the Flexible Cables to Trap Connectors

Plug No.	No. of Pins	C.B.A.
FP1	14 Pin	Main C.B.A.
FP2	18 Pin	Main C.B.A.
FP3	21 Pin	Main C.B.A.
FP4	10 Pin	Main C.B.A.
FP5	18 Pin	Main C.B.A.
FP6	10 Pin	Main C.B.A.
FP7	20 Pin	Main C.B.A.
FP8	12 Pin	Main C.B.A.
FP9	20 Pin	Main C.B.A.
FP11	13 Pin	Main C.B.A.
FP901	6 Pin	EVF C.B.A. (Model : A)
FP901	20 Pin	Color EVF A C.B.A.(Model : B)
FP902	3 Pin	Color EVF A C.B.A.(Model : B)
FP9001	12 Pin	LCD C.B.A.
FP9002	17 Pin	LCD C.B.A.

(Removal of Installation of Flexible Cable)

a. Removal
   1. On the Trap Connector, pull out both ends of the Locking Tab surrounding the cable end to release the Trap portion of the Connector. Then pull Flexible Cable out to remove as shown in Fig. 3.

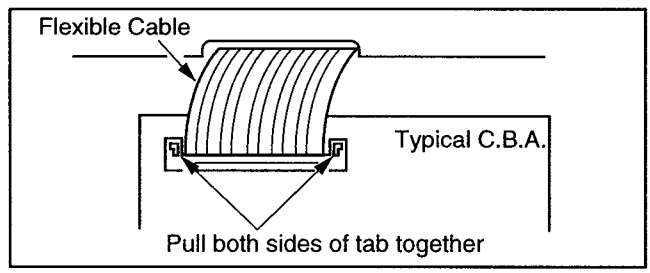


Fig. 3

b. Installation
   1. Insert the end of the Flexible Cable into the Trap Connector so it lays smoothly across the slot.
   2. Press the middle of the Cable firmly against the Trap Connector slot, and hold it securely.
   3. Without pinching the Cable, press the Locking Tabs in against the Trap Connector until both ends snap into their locked positions
   4. Pull lightly on the Cable to check for positive connection.

Note : Take care when removing or installing the Flexible Cable to prevent Cable damage.

F. Elimination of Tape slack

Before inserting the Cassette Tape in the Compact VHS Movie, take up slack in the tape by turning the Takeup Reel Gear on the side of the Cassette Tape. Turn it in the direction of the arrow until no slack is evident and opposite reel begins to turn.

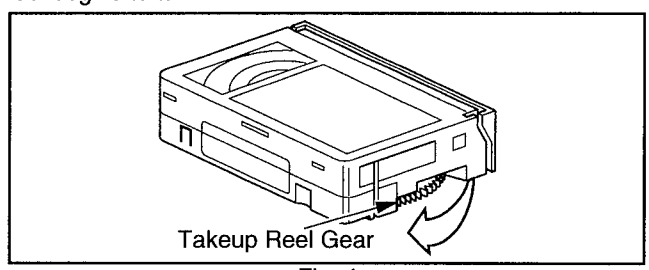


Fig. 4

G. Insertion (or Removal) of Cassette Tape

As in Fig. 5, hold the tape vertically to insert or remove the tape.
(Be sure to eliminate slack before inserting the tape.)

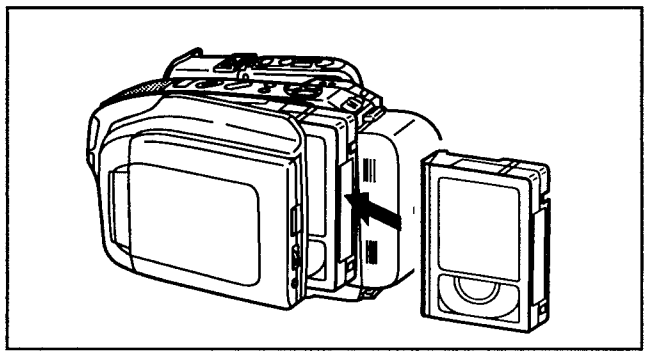


Fig. 5

H. Black Screws on the Chassis

Black Screws are used on the Mechanical Chassis to identify screws that require adjustment.

I. Service of Capstan Motor Unit

Since the CAPSTAN MOTOR UNIT has already been adjusted at the factory, do not try to adjust the FG Head. The CAPSTAN MOTOR UNIT is supplied as a complete assembly as a replacement part.

J. Loading Motor Drive IC6007 with Thermal Shutdown Function

Loading Motor Drive IC6007 has a thermal shutdown function to prevent overheating. Therefore, when the temperature of IC6007 raises for some reason, IC6007 will shutdown by itself. And the unit will go to power off due to loading lock detection. However, when the temperature of IC6007 returns to normal, IC6007 will resume operation. Then unit will be fully operational.

Note : Do not replace IC6007 until confirming that the Thermal Shutdown function is not operating.

K. Service of A/C Head Unit

Since the A/C Head Unit has already been adjusted at the factory, do not try to adjust the TILT Black Screw (C).
The A/C Head Unit is supplied as a complete assembly as a replacement part.

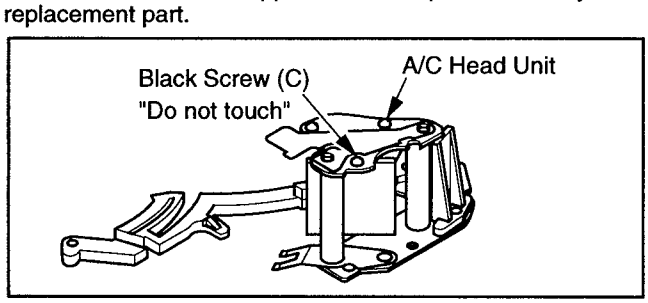


Fig. 6

L. How to use TP Board Kit

It is possible to confirm and perform EVR (Electrical Variable Resistor) adjustment using TP Board Kit without Cabinet disassembly.

1. Remove Screw D and open EVR Cover.
2. Connect a TP Board Kit as shown in Fig. 8.

(For more details, refer to the Electrical Adjustment Procedure.)

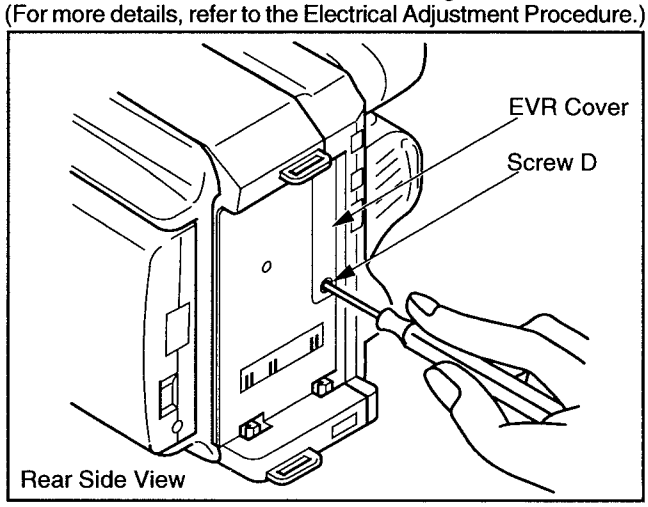


Fig. 7

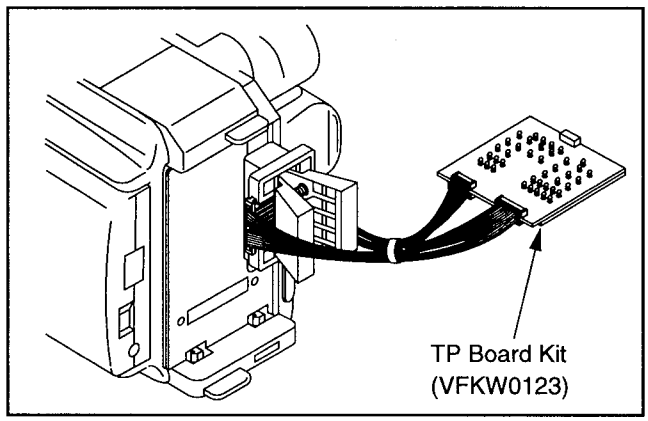


Fig. 8

M. Service of T, S Posts and A/C Head Unit

It is possible to confirm and Align tape path by only removing Cassette Cover.

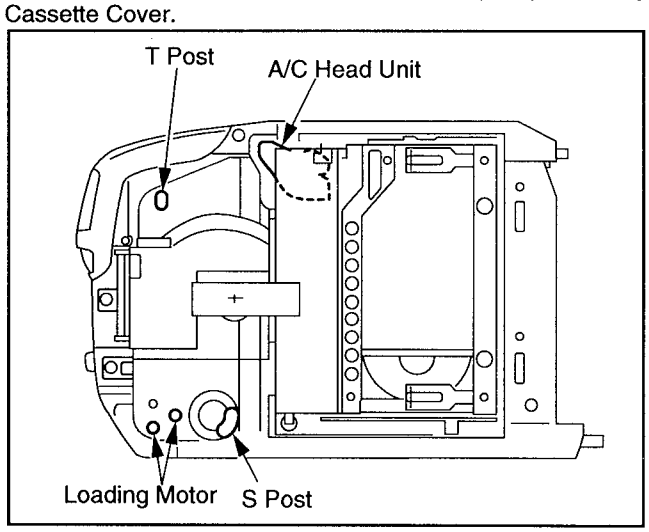


Fig. 9

N. Position of EARTH BRUSH

When replacing the Earth Brush, adjust the position of the Earth Brush so that the A becomes 0.5 ~1mm as shown Fig. 10.

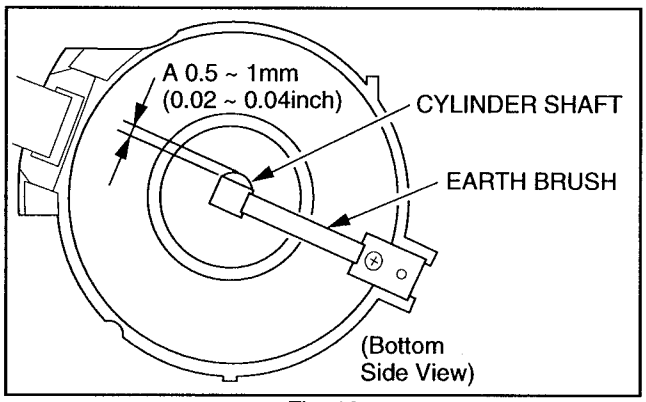


Fig. 10

O. Description of Emergency Indications

When something unusual occurs in the deck, LED begins flashing and continuous for 15 seconds to indicate an Emergency, only in the areas shown in the chart.
Please use this chart for Servicing in the event of these emergency indications.

No.	Information	POWER LED	TALLY LED	Cause and Characteristic
①	Cylinder Lock	———	●	CYLINDER Motor stops in the REC,PB,CUE, REVIEW or STILL MODE for 2 second.
②	Takeup-Reel Lock	◐	———	There is no TAKEUP REEL sensor pulse for 2.3 seconds (PLAY, REC) or 0.7 second (CUE, REVIW, FF, REW).
③	Battery Under Cut or DEW	⊗	———	When the Battery voltage drops to 5.3V. Or excessive moisture condenses in the Unit.

NOTE : ◐ : Indicates LED Flashing at 3Hz rate (duty 50%)
⊗ : Indicates LED Flashing at 0.8Hz rate (duty 50%)
● : Indicates LED Flashing at 1Hz rate (duty 50%)

P. How to read the Disassembly/Assembly Procedures

(For Cabinet Part)

STEP /LOC. No.	PART	Fig. No.	REMOVE ∗UNLOCK/RELEASE/ UNPLUG/UNCLAMP/ UNSOLDER
①	EVF Unit	D17	4(S-1) Eye Cap Unit

ⓐ ⓒ ⓓ ⓔ

(For Mechanical Part)

STEP LOC. No.	START -ING No.	PART	Fig. No.	REMOVE ∗UNHOOK/UNLOCK /RELEASE/UNPLUG/UNSOLDER
①	1	Safety Tab SW	DM2 DM3	(S-1) ∗Unsolder
②	2	Cassette Guide	DM3	2(S-2)
③	1	Cassette Up Unit	DM3	2(S-3) ∗Locking Portion
④	4	Tension Arm Unit	DM4	(C-1)

ⓐ ⓑ ⓒ ⓓ ⓔ

ⓐ : Order of steps in Procedure
When reassembling, perform the step(s) in the reverse order.
These numbers are also used as the identification (location) No. of parts in Figures.

ⓑ : Starting No. followed by corresponding part which can be removed at this stage.
See example below.

Example : Safety Tab SW can be removed without removing any other parts.
But Cassette Up Unit can be removed only after removing Safety Tab SW and Cassette Guide. (No. ③).

ⓒ : Part to be removed or installed.

ⓓ : Fig. No. showing Procedure or Part Location.

ⓔ : Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped or unsoldered.
P=Spring W=Washer
C=Cut Washer R=Retaining Ring
N=Nut S=Screw
∗=Unhook,unlock,release,unplug or unsolder
4 (S-3) = 4 Screws (S-3)

Q. Replacement procedure for Leadless (Chip) Component

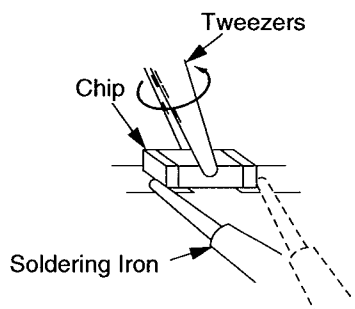
The following procedures are recommended for the replacement of the leadless components used in this Unit.

1. Preparation for replacement
   a. Soldering Iron
      Use a pencil-type soldering iron using less than 30 watts.
   b. Solder
      Eutectic Solder(Tin 63%, Lead 37%) is recommended.
   c. Soldering time
      Do not apply heat for more than 4 seconds.
   d. Preheating
      Leadless capacitor must be preheated before installation.
      (130°C~150°C, for about two minutes.)

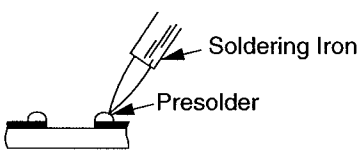
Note :
   a. Leadless component must not be reused after removal.
   b. Excessive mechanical stress and rubbing of the component electrode must be avoided.

2. Removing the leadless component
   Grasp the leadless component body with tweezers and alternately apply heat to both electrodes. When the solder on both electrodes is melted, remove leadless component with a twisting motion.

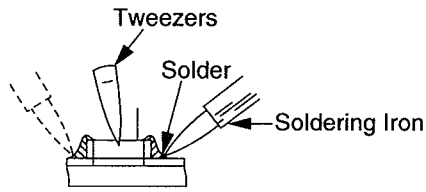
Note :
   a. Do not attempt to lift the component off the board until the component is completely disconnected from the board by a twisting action. The leadless component is attached to the PCB with glue. So carefully twist the component when removing it so as not to break or damage any fail under the component.
   b. Take care not to break the copper foil on the printed board.



3. Installation of the leadless component
   a. Presolder the contact points of the circuit board.
   b. Press the part downward with tweezers and solder both electrodes as shown below.



Note :
Do not glue the replacement leadless component to the circuit board.



R Special Note

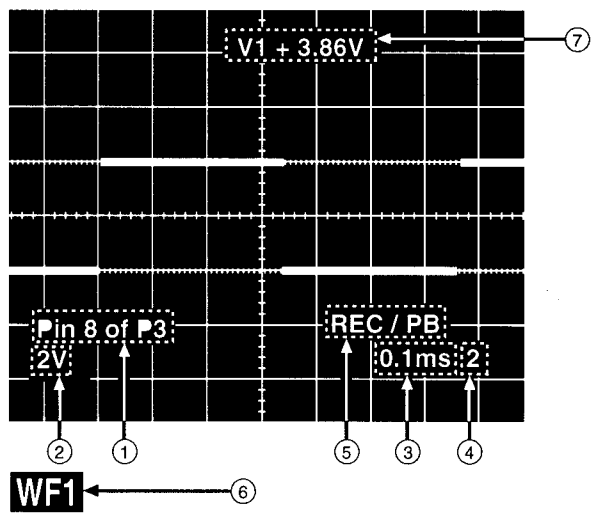
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handlings techniques described under the"ELECTROSTATICALLY SENSITIVE(ES)DEVICES" section of this service manual.

S. Voltage Measurement

Voltage Chart
1. VCR Section
   a. Audio Section
      monoscope signal in SP REC and PB mode.
   b. Other Sections
      color bar signal in SP REC and PB mode.
   Note :
      Voltage Indications for REC and PB mode on Schematic are as shown below.

2. Camera Section
   Camera Mode.

T. How to Read Waveform



① Connecting Point
② Volts / Div
③ Time / Div
④ Trigger Channel of the scope (1 : UPPER, 2 : LOWER)
⑤ Operation Mode of VCR
⑥ Waveform Point on Schematic
⑦ △V1 : Peak to Peak.

U. " ○ " Marks on C.B.A. Layout Indicate

" ○ " indicates the connection point between the Foil Side and the Component Side the C.B.A.

V Indication for Zener Voltage of Zener Diodes

The Zener Voltage of Zener Diodes are indicated as such on schematic Diagrams.

Example : (6.2V) ...Zener Voltage

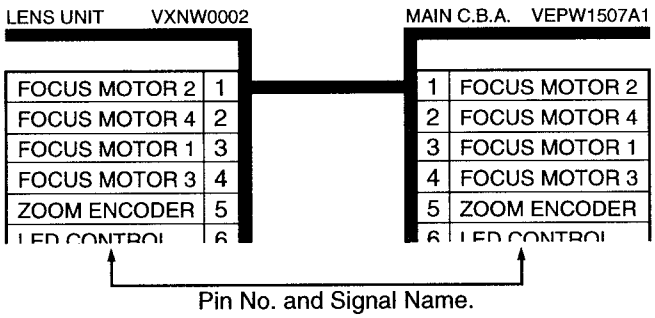
W. How to Identify Connectors on Schematic Diagram

Each connector is labelled with a connector No. and Pin No. indicating what it is connected to, in other words, its counter part.

Connections between large P.C.B.'s and small circuit Boards are illustrated on the large P.C.B. schematics.

Use the interconnection schematic diagram to find the connections between associated connectors.

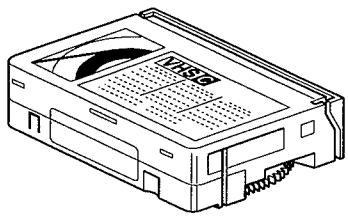
Example : The connections between C.B.A.s are as shown below.



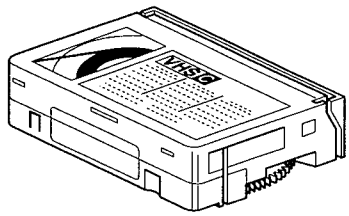
Use this cross reference chart to determine the equivalent model used in the adjustment procedures, schematic diadrams, exploded views and parts list.

C. Service Fixtures & Tools

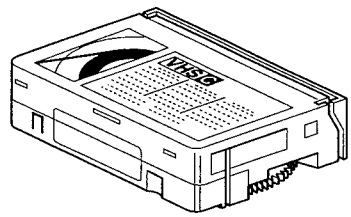
VHS-C Alignment Tape VFMS0004H6C



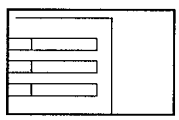
VHS-C Alignment Tape VFMW0001C



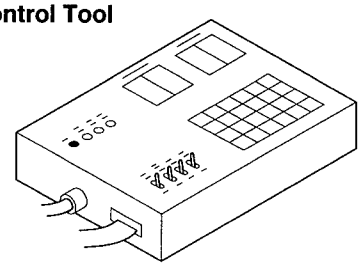
VHS-C Alignment Tape VFMW0002C



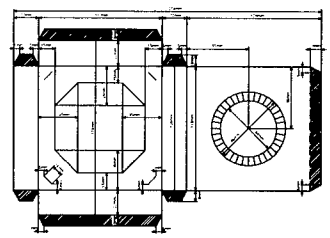
Head Cleaning Stick VFK27



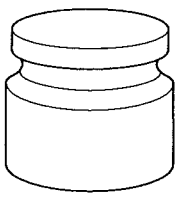
Digital Adjustment Control Tool VFKW0083



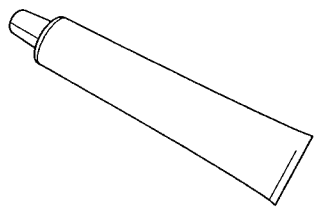
A.W.B. Adjustment Fixture VFKW0066



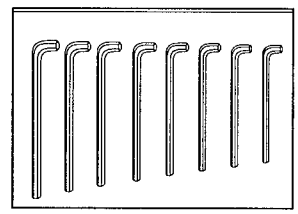
Grease VFKS0081



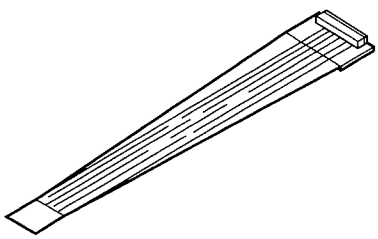
Molytone Grease VFK1024



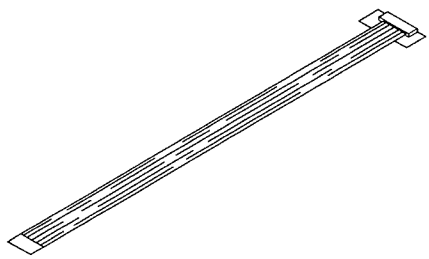
Hex. Wrench Set VFK0326



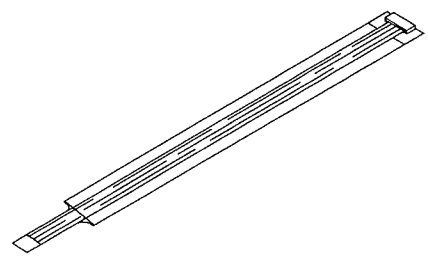
Extension Cable 18P VFKW0084A



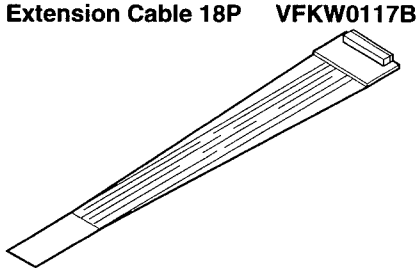
Extension Cable 12P VUVS0007



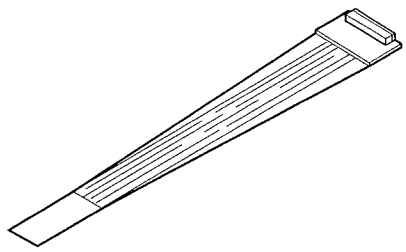
Extension Cable 14P VFKW0124A



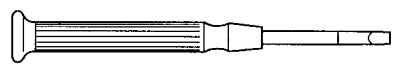
Extension Cable 18P VFKW0117B



Extension Cable 21P VUVS0008

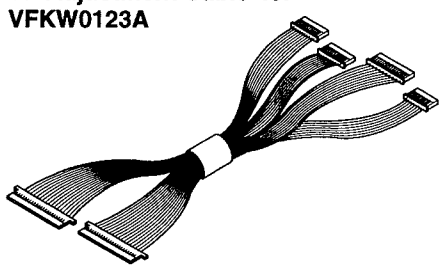


Lock Screwdriver VFKS0069

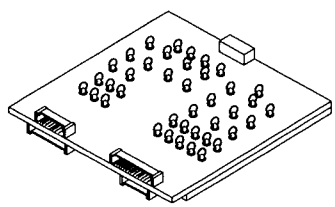


TP Board Kit VFKW0123

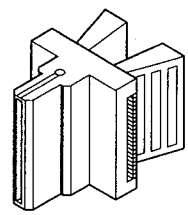
TP Adjustment Cable 40P VFKW0123A



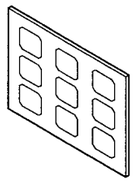
TP Adjustment PCB 40P VFKW0123B



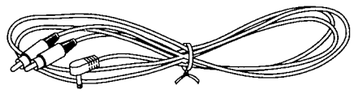
TP Clip 40P VFKW0123C



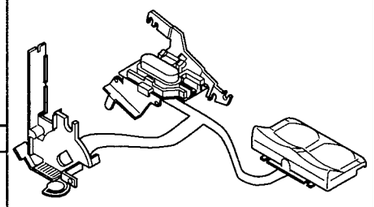
Color Chip Chart **VFKW0116**



Audio Video Cable **VJAW0032**

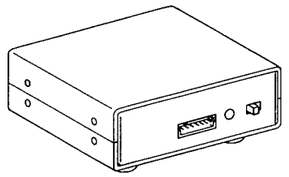


Side L Connector Unit **VEQW0261**

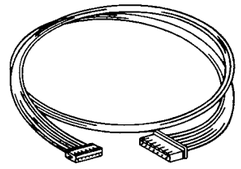


CAAS Kit VFKW1000

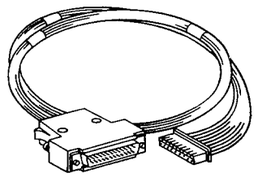
Interface Box **VFKW1000A**



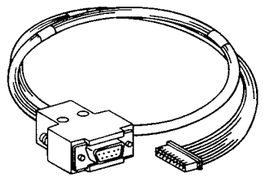
Camera Connecting Cable VFKW1000B



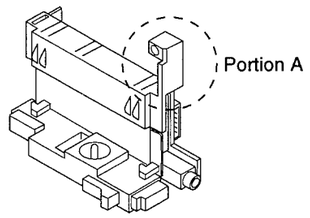
25pin RS-232C Cable **VFKW1000D**



9pin RS-232C Cable **VFKW1000C**



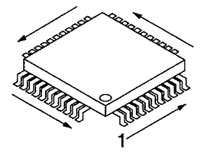
Battery Catcher Unit **VJHW0053W**



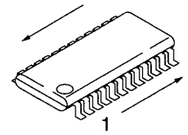
Be careful not to break the portion A when removing or installing the Battery Catcher Unit.

D. ICs / TRs INFORMATION

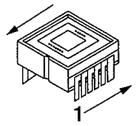
GENERAL C B A / ASS'Y PARTS



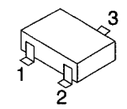
AN2106FAP-V, AN2401NFH,
AN2522FHPK,AN3897FH,
BA7757BK, BA9710KV, C132EM-000
HD3042ST23F, IR3Y18A, MN5263,
MN67324, MN675048A4C3,
S29355A-7S03, S29355A-7S04



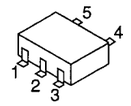
AN1358S-E1, AN2018S-E1,AN2515NS,
AN3339SB, BA10324AFVE1, BA6417F-T1,
BA7071F-E2, BA7785FS-E2, LB1837MTPT1,
MC14050BDTEL, MN3112SA-E1, MN38663S,
S3510AEFJTB, S80730SLATT1, S80739SND3T1,
TC74AC14FS, TC7W14F, TC7W32F, TDA8706A,
UN224-TX, UPD6462GS701,



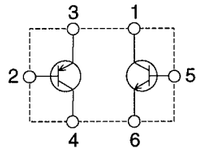
MN3716CFE



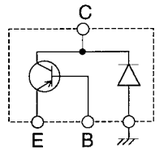
XC62AP4502MR



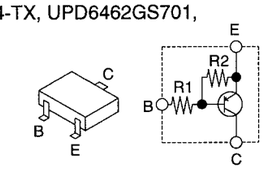
S2900A-7S01
S80739SND3T1



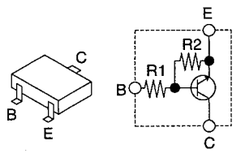
XN4601



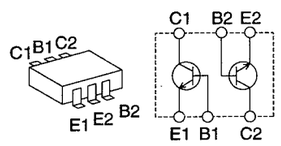
MPL1-TL,MSB710-R,
MSD1328-R,MSD602-R,
MUN5213



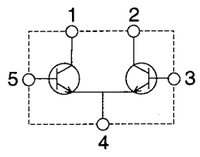
UN5111 (R1=10K, R2=10K)
UN5112 (R1=22K, R2=22K)
UN5113 (R1=47K, R2=47K)
UN5115 (R1=10K, R2=OPEN)



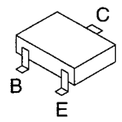
UN5212 (R1=22K, R2=22K)
UN5213 (R1=47K, R2=47K)
UN5217 (R1=22K, R2=OPEN)



XN4501



XN1501



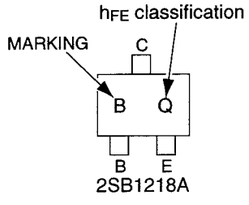
2SA1610, 2SA1615-ZT1L, 2SB1073, 2SB1218A,
2SB1424T100Q, 2SB1585, 2SB1628-T1ZX,
2SB709A, 2SB709A-RS, 2SC3931, 2SC4176-TB33,
2SD1119, 2SD1328, 2SD1819A, 2SD968A-S,
2SK1958, 2SD601A, 2SK1299STL,

HOW TO READ THE IDENTIFICATION MARK OF CHIP TRANSISTORS IN THIS UNIT.

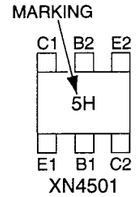
MARKING	PART No.	MARKING	PART No.
Y34	2SA1610	G21	2SK1958
K	2SA1615	L01	MPL1-TL
I	2SB1073	1RS	MSB710
B	2SB1218A	1D	MSD1328
AEPJ	2SB1424T100Q	W	MSD602
1R	2SB1585	8C	MUN5213
ZY	2SB1628	6A	UN5111
B	2SB709A	6B	UN5112
U	2SC3931	6C	UN5113
B34	2SC4176	6E	UN5115
T	2SD1119	8B	UN5212
1D	2SD1328	8C	UN5213
Z	2SD1819A	8H	UN5217
3W	2SD1979	5R	XN1501
Z	2SD601A	5H	XN4501
V	2SD968A-S	5C	XN4601

HOW TO READ THE IDENTIFICATION MARK OF CHIP DIODES IN THIS UNIT.

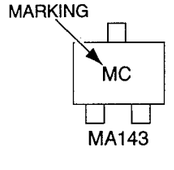
MARKING	PART No.	MARKING	PART No.
SI	1SS357	A61	MA720
1B	MA111	2A	MA728
MO	MA142WA	B4	MA736
MU	MA142WK	6-8	MA8068-M
MC	MA143	8-2	MA8082-L
M3A	MA199	I23	RD12S-B
12A	MA3120WA	K260	SFPL-52V
6F	MA365E	———	———



2SB1218A



XN4501



MA143

III. ADJUSTMENT PROCEDURES
A. MECHANICAL ADJUSTMENT PROCEDURES

1. DISASSEMBLY OF CABINET PARTS

1 DISASSEMBLY FLOW CHART

This flow chart indicates the disassembly steps of the cabinet parts and the P.C.Boards in order to gain access to item (s) to be serviced. When reassembling, perform the step (s) in the reverse order. Bend, route and dress the wires as they were originally.

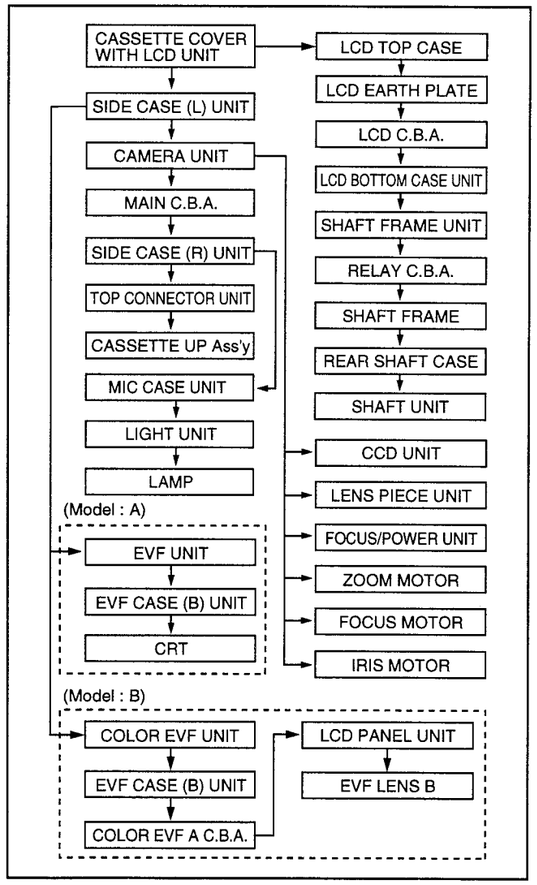


Fig. D1

Note :

a. When removing the cabinet, work with care so as not to break the Locking Portions.
b. Place a cloth or some other soft material under the P.C. Boards or Unit to prevent damage.
c. When reinstalling, ensure that the connectors are connected and electrical components have not been damaged.
d. Do not supply power to the Unit during disassembly.
e. Use a wrist strap to provide ESD protection while disassembling or assembling, and while operating the Unit disassembled.

2. DISASSEMBLY METHOD

2-1. VCR PORTION

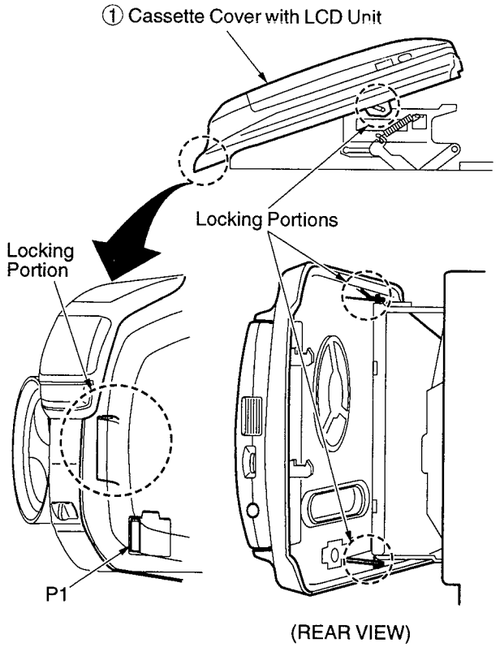
STEP /LOC. No.	PART	Fig. No.	REMOVE ＊UNLOCK/RELEASE/ UNPLUG/UNCLAMP/ UNSOLDER
①	Cassette Cover with LCD Unit	D2	＊Connector P1 ＊Locking Portions
②	Side Case (L) Unit	D3	(S-1), (S-2), (S-3), 2(S-4) (S-5) EVR Cover, 2(S-6), (S-7), (S-8), 2(S-9) ＊Connector receptacle, ＊Connector P3
③	Camera Unit	D4	2(S-10),(S-11) ＊Connector FP4,FP8,FP9 ＊Locking Portion CCD Drive Shield Case (B)
④	Main C.B.A.	D5	2(S-12),(S-13) ＊Connector FP1,FP2,FP3, FP5,FP6,FP7,FP11,P1, P2,B2 ＊Locking Portion Head Amp Shield Case (B) Earth Sleeve
⑤	Side Case (R) Unit	D6	2(S-14), (S-15) Eject Plate C, ＊Locking Portion
⑥	MIC Case Unit	D7	(S-16)
⑦	Top Connector Unit	D8	(S-17),2(S-18) Fade Knob,Eject Knob, Light Knob, EIS Knob, Digital Knob, Display Knob
⑧	Cassette Up Ass'y	D9	2(S-19) ＊Locking Portions

List of Abbreviations :
2(S-4)=2 Screws(S-4)

COMPARISON CHART OF MODELS & MARKS

MODEL No.	MARK
PV-L657	A
PV-L757	B

PARTS	① Cassette Cover with LCD Unit



Note : Before removing Cassette Cover with LCD Unit, place the unit in the cassette up position by pressing the eject botton with the power source, or releasing Cassette Lock Lever as shown in " C. How to Remove Jammed Tape " on page II-12.

(Locking Portion)

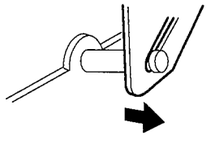
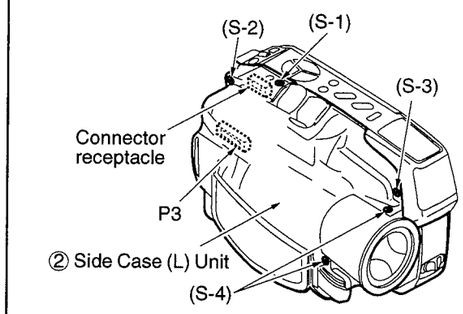
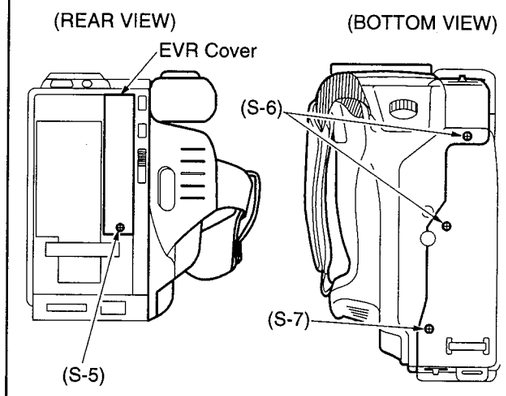


Fig. D2

PARTS	② Side Case (L) Unit





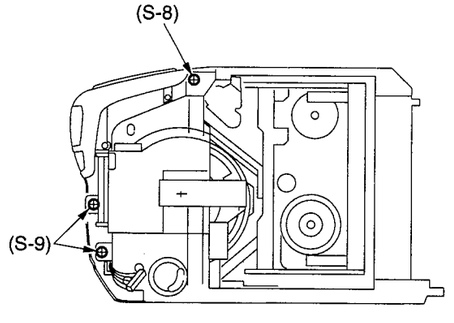
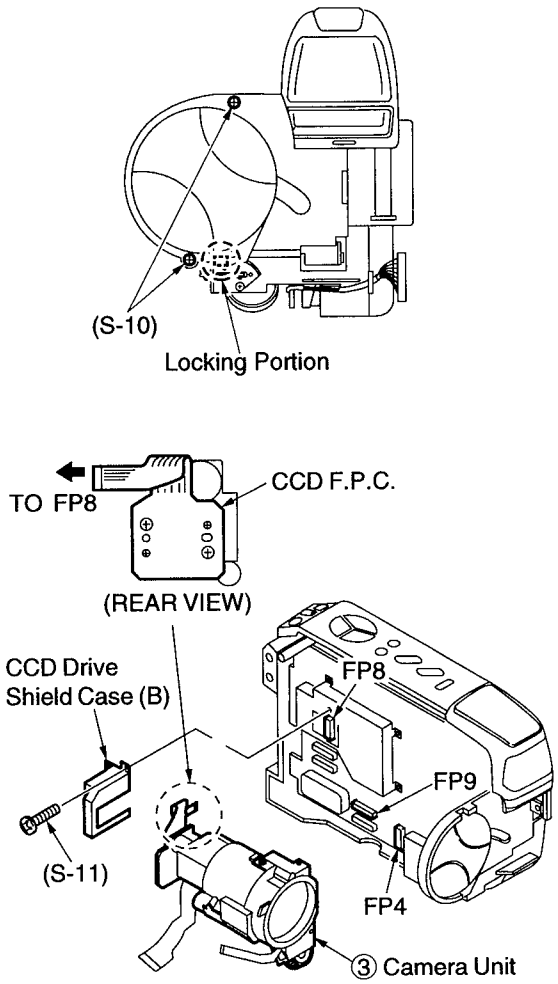


Fig. D3

PARTS	③ Camera Unit



Note : When inserting the CCD F.P.C. to the connector FP8,reverse the CCD F.P.C. and align the Foil pattern on the CCD F.P.C. to the terminal on the connector FP8.

(BOTTOM VIEW)

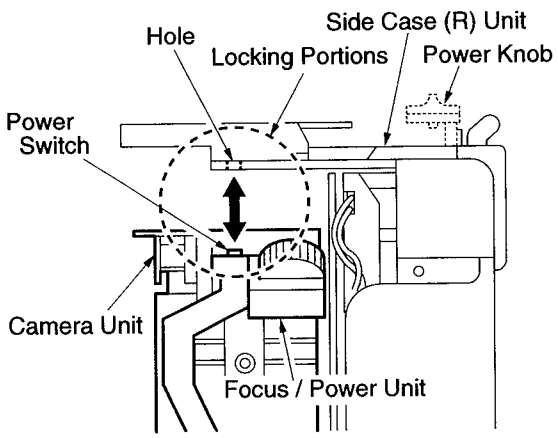


Fig. D4

PARTS	④ Main C.B.A.

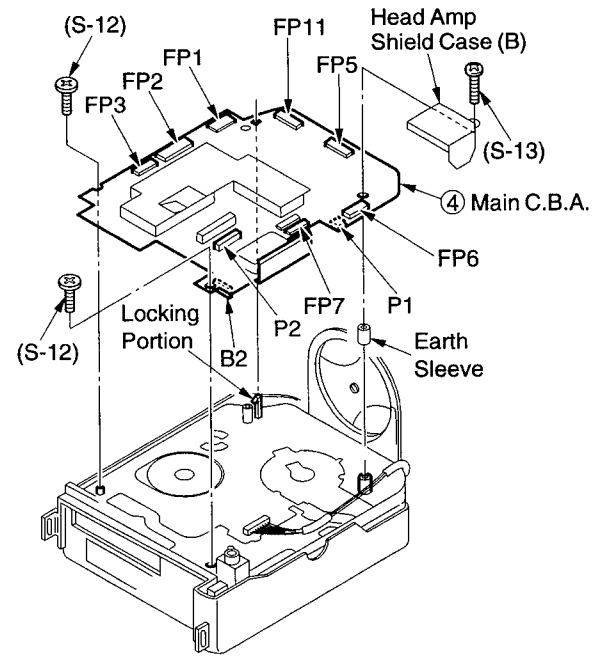


Fig. D5

PARTS	⑤ Side Case (R) Unit

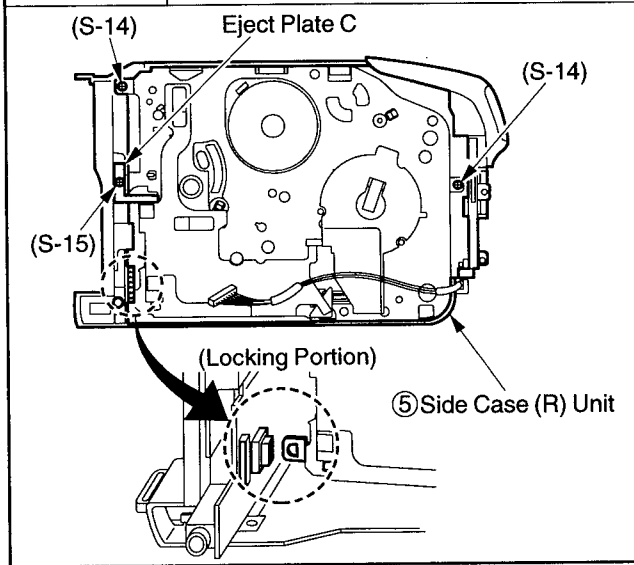


Fig. D6

PARTS	⑥ MIC Case Unit

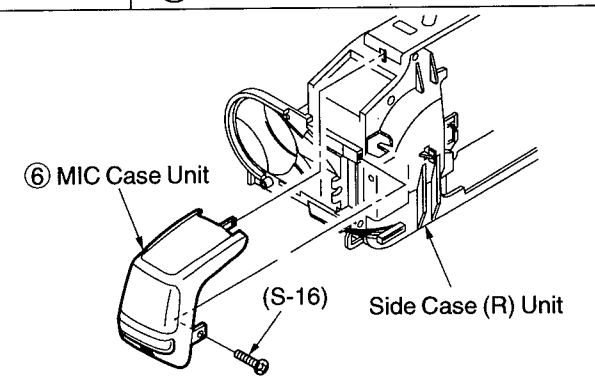


Fig. D7

PARTS | **⑦ Top Connector Unit**

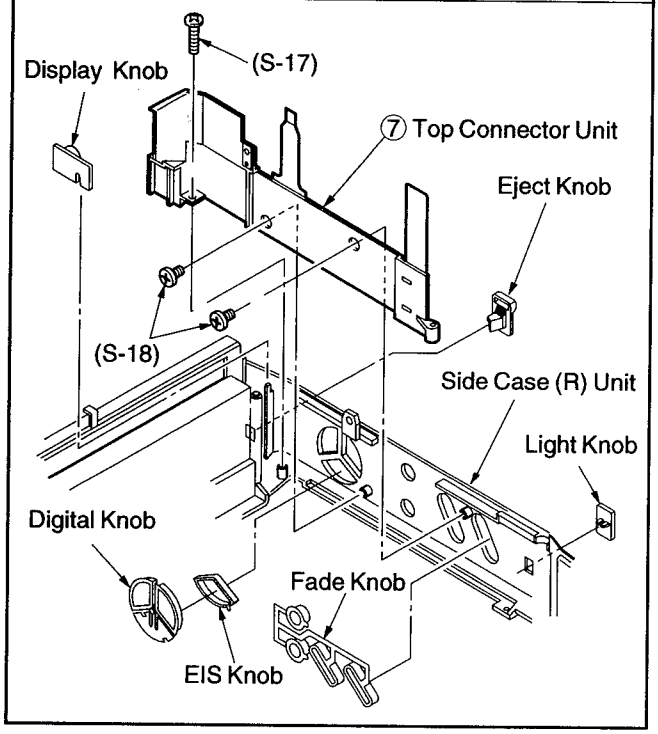
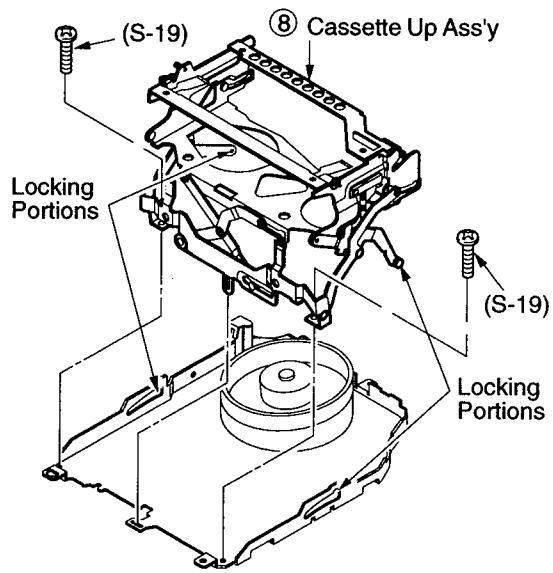
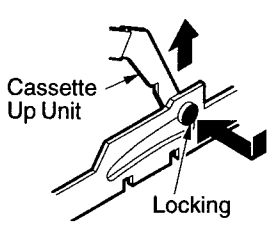


Fig. D8

PARTS | **⑧ Cassette Up Ass'y**



(Locking Portion)



Note: Before removing the Cassette Up Ass'y, place the Unit in the Cassette up position.

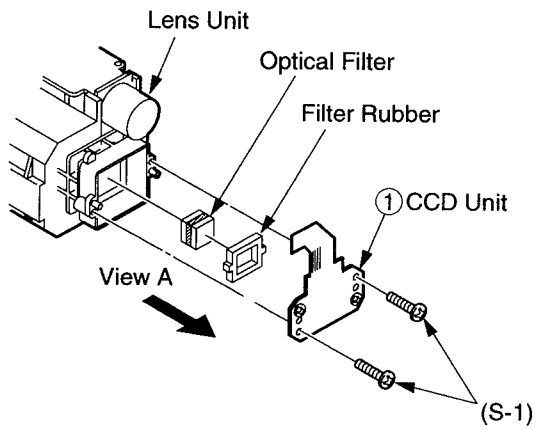
Fig. D9

2-2. CAMERA PORTION Ⓐ

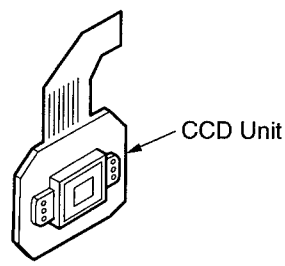
Note : Use a Wrist Strap while removing the CCD Unit.

STEP /LOC. No.	PART	Fig. No.	REMOVE * UNLOCK/RELEASE/ UNPLUG/UNCLAMP/ UNSOLDER
①	CCD Unit	D10	2(S-1) Optical Filter,Filter Rubber

List of Abbreviations :
2(S-1)=2 Screws(S-1)



(View A)



Note : When removing the CCD Unit, take care so as not to allow the Optical Filter to fall out of the Lens Unit.

Fig. D10

Precautions for installation of CCD Unit

Note : Use a Wrist Strap while removing the CCD Unit.

Parts to be replaced related to the CCD Unit

The CCD Unit and the CCD F.P.C. are available. The CCD by itself is not available because it is a part of the CCD Unit.

1) If the CCD itself is damaged, replace the CCD Unit with a new CCD Unit.

2) If the CCD F.P.C. is damaged, but the CCD is normal, replace the CCD F.P.C. carefully by resoldering the lead pins on the CCD Unit.
Note :
   a. Do not apply heat directly to the CCD when unsoldering or resoldering. Use minimum time when resoldering pins of CCD to prevent damage to the CCD.
   b. Do not touch the CCD window surface when replacing it.
   c. Clean the CCD window surface with Lens cleaning materials.

3) To complete the reassembly, reverse the previous disassembly steps.
Note :
   a. Before reinstalling, clean the Optical Filter with Lens Cleaning materials.
   b. If the Optical Filter is removed from the front of the CCD Unit, replace it with the IR Cut Section (Blue portion) positioned toward the Lens Unit.
   c. Ensure that the Filter Rubber is mounted on the Optical Filter before installation of the Filter Rubber.
   d. After replacement of the CCD, readjust the followingcontrols.
      1. FREQUENCY ADJUSTMENT
      2. BLANKING ADJUSTMENT
      3. VCO ADJUSTMENT
      4. SYNC LEVEL ADJUSTMENT
      5. BURST LEVEL ADJUSTMENT
      6. HALL AMP ADJUSTMENT
      7. AUTO FOCUS ADJUSTMENT
      8. BLOOMING (SMEARING) ADJUSTMENT
      9. GAMMA ADJUSTMENT
      10. A/D INPUT ADJUSTMENT
      11. IRIS PWM ADJUSTMENT
      12. YH LEVEL ADJUSTMENT
      13. PEDESTAL LEVEL ADJUSTMENT
      14. WB ADJUSTMENT

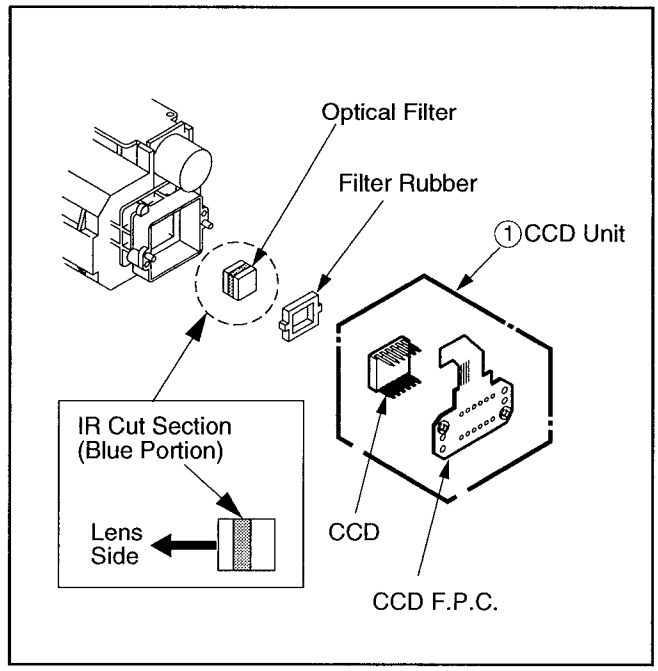


Fig. D11

2-3. CAMERA PORTION Ⓑ

STEP /LOC. No.	PART	Fig. No.	REMOVE ＊UNLOCK/RELEASE/ UNPLUG/UNCLAMP/ UNSOLDER
①	Lens Piece Unit	D12A	2(S-1)＊Locking Portions
②	Focus / Power Unit	D12B	2(S-2)
③	Zoom Motor	D13A	2(S-3)＊Unsolder
④	Focus Motor	D13A D13B	2(S-4)＊Unsolder
⑤	Iris Motor	D13A D13B	(S-5)＊Unsolder ＊Locking Portions

List of Abbreviations :
2(S-1)=2 Screws(S-1)

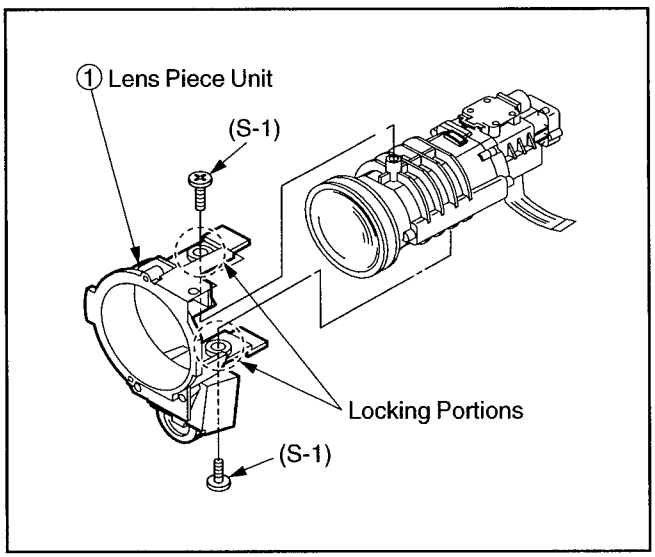


Fig. D12A

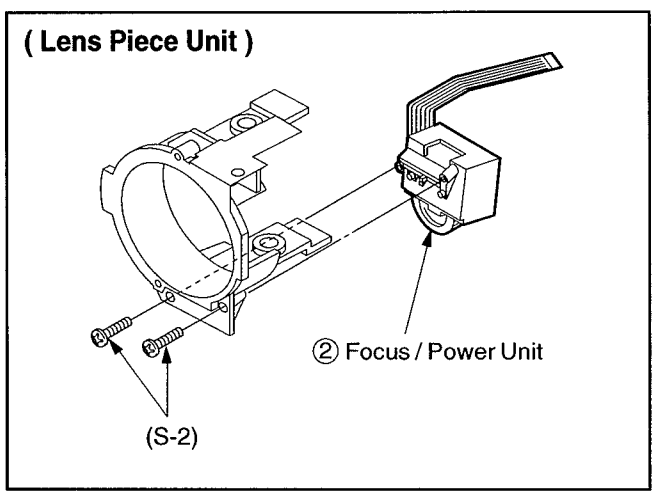


Fig. D12B

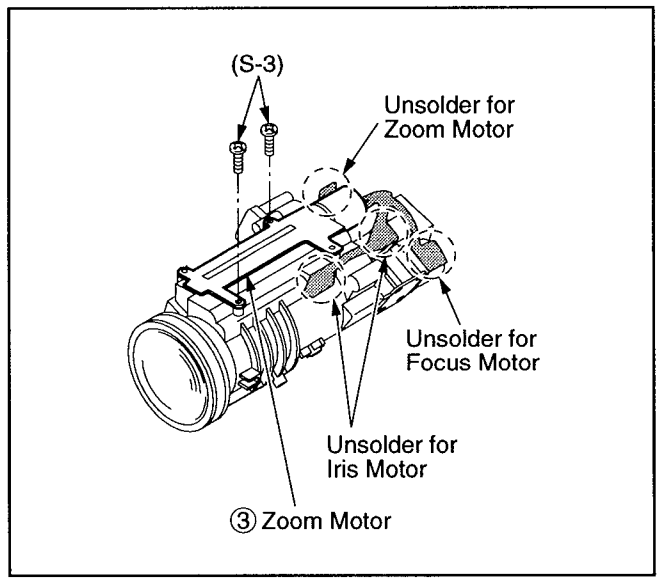


Fig. D13A

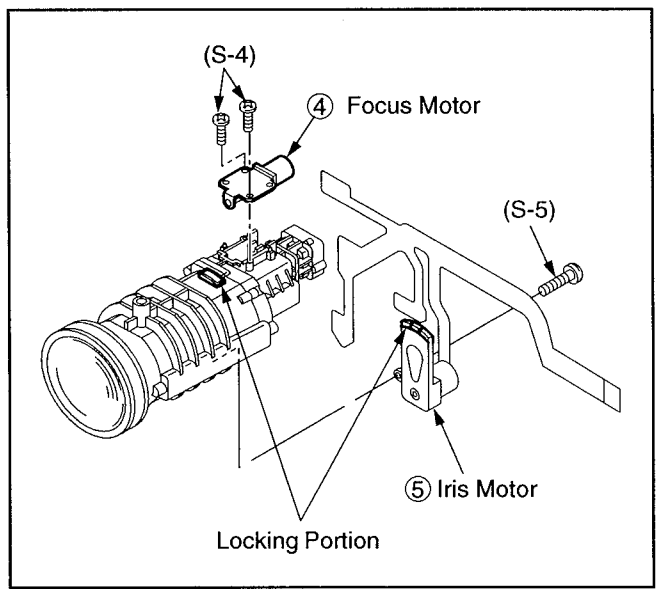


Fig. D13B

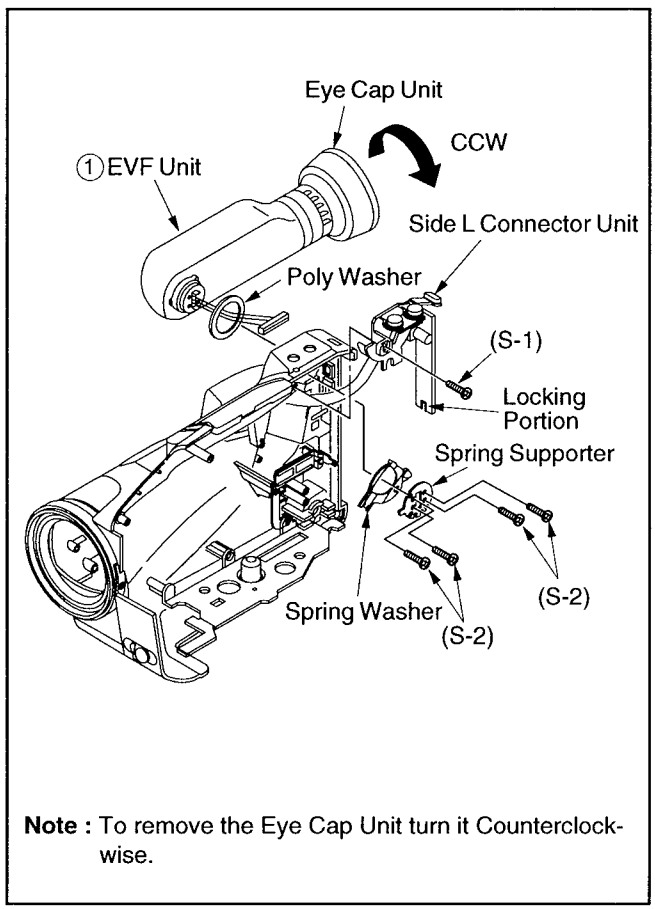
2-4. EVF PORTION (Model : A)

STEP /LOC. No.	PART	Fig. No.	REMOVE * UNLOCK/RELEASE/ UNPLUG/UNCLAMP/ UNSOLDER
①	EVF Unit	D14A	(S-1),4(S-2) * Locking Portion Eye Cap Unit, Side L Connector unit Spring Supporter, Spring Washer,Poly Washer
②	EVF Case (R) Unit	D14B	3(S-3) * Locking Portions CRT Unit, EVF Dust Cover, VCR Operation Unit EVF Case (L) Unit
③	CRT	D14C D14D	* Connector P903 * Locking Portion CRT Socket Unit, DY Ass'y

List of Abbreviations :
(S-1)=Screws(S-1)

COMPARISON CHART OF MODELS & MARKS

MODEL No.	MARK
PV-L657	A
PV-L757	B



Note : To remove the Eye Cap Unit turn it Counterclockwise.

Fig. D14A

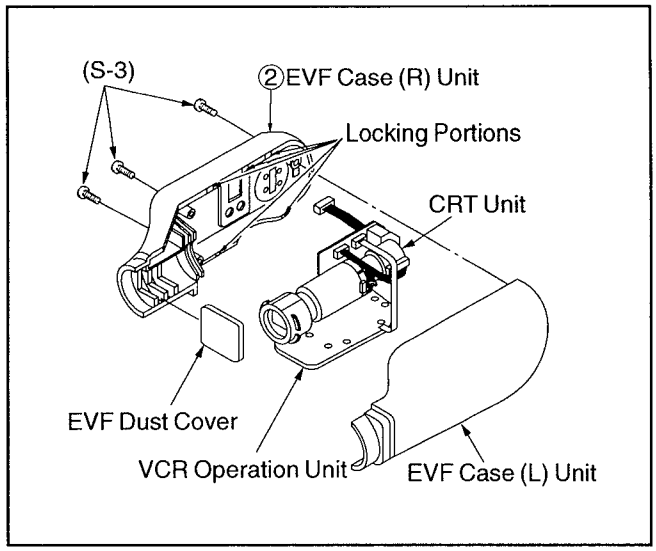


Fig. D14B

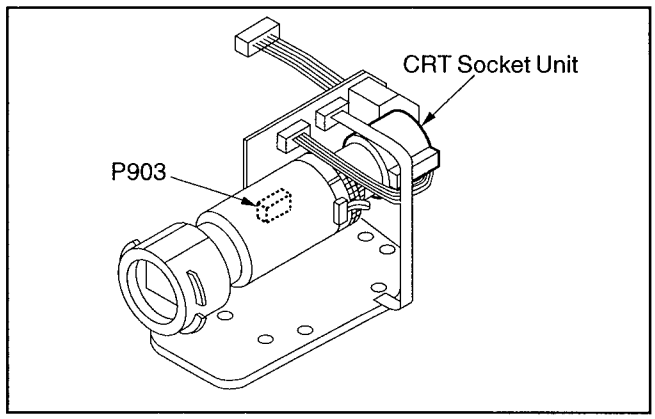


Fig. D14C

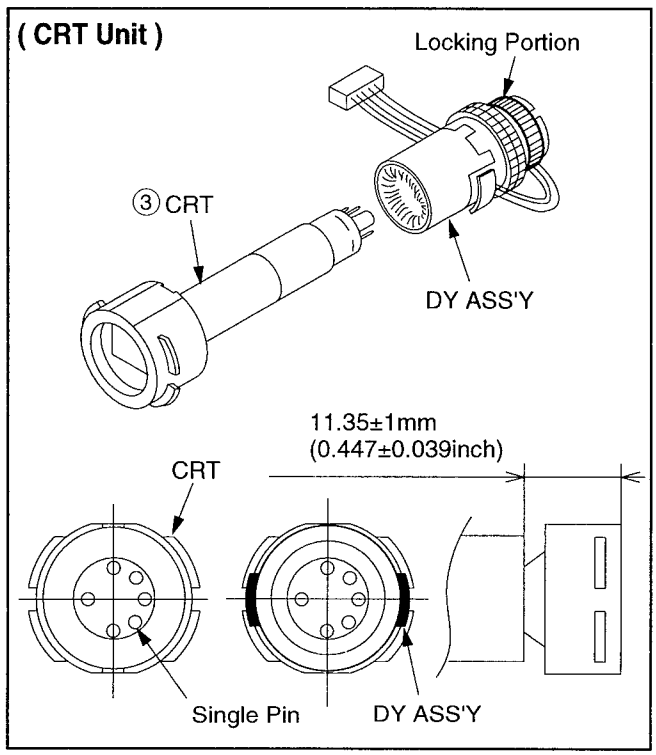


Fig. D14D

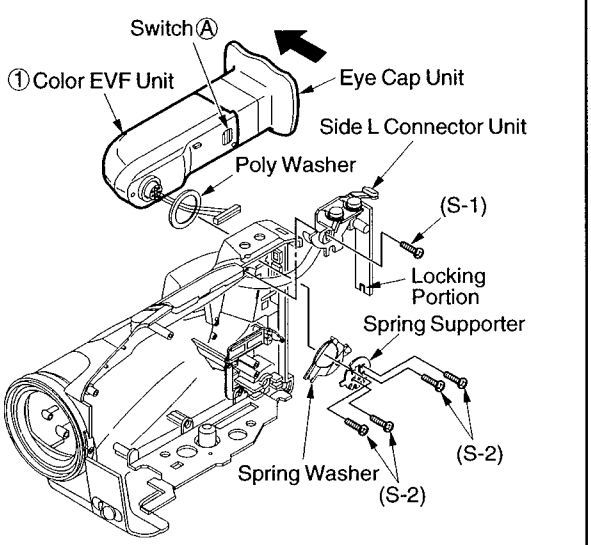
2-5. COLOR EVF PORTION (Model : B)

STEP /LOC. No.	PART	Fig. No.	REMOVE * UNLOCK/RELEASE/ UNPLUG/UNCLAMP/ UNSOLDER
①	Color EVF Unit	D15A	(S-1), 4(S-2) * Locking Portion Spring Supporter, Spring Washer,Poly Washer, Side L Connector Unit, Eye Cap Unit
②	EVF Case (B) Unit	D15B	2(S-3) * Locking Portions Lock Knob, Lock Spring, LCD Unit, VCR Operation Unit,EVF Case (A) Unit
③	COLOR EVF A C.B.A.	D15C D15D	* Connector , FP902 VCR Operation Unit, * Connector ,FP901,B902 Color EVF B C.B.A. Unit
④	LCD Panel Unit	D15D	* Locking Portions Color EVF B C.B.A. LCD Cushion, LCD Holder Unit
⑤	EVF Lens B	D15E	* Locking Portions LCD Holder,Lens Cover A, Lens Cover B

List of Abbreviations :
(S-1)=Screws(S-1)

COMPARISON CHART OF MODELS & MARKS

MODEL No.	MARK
PV-L657	A
PV-L757	B



Note : To remove the Eye Cap Unit, slide the switch Ⓐ then lift the Eye Cap Unit.

Fig. D15A

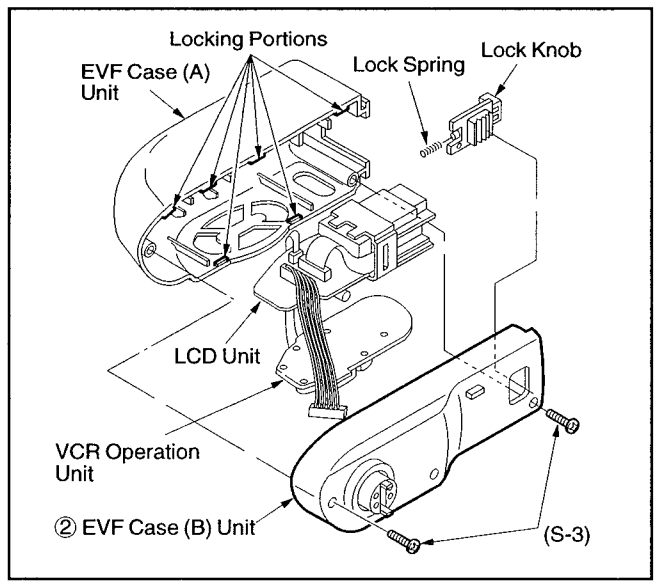


Fig. D15B

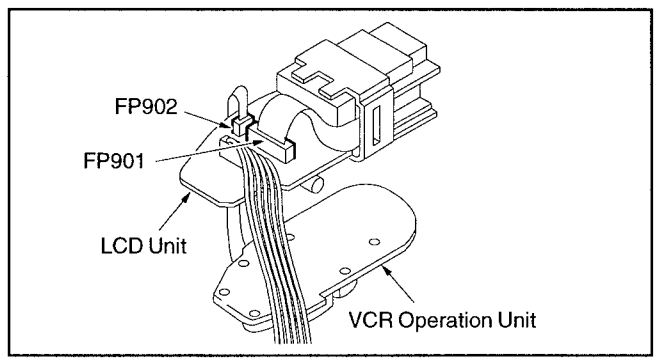


Fig. D15C

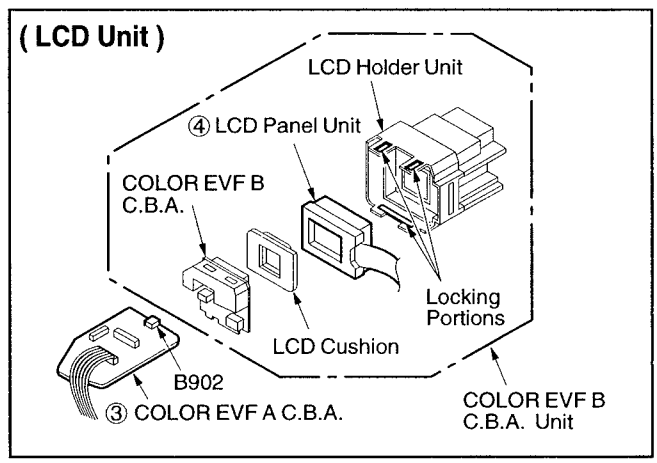


Fig. D15D

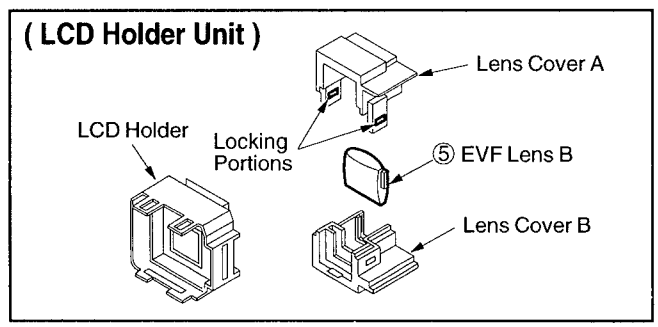


Fig. D15E

2-6. CASSETTE COVER WITH LCD UNIT

STEP /LOC. No.	PART	Fig. No.	REMOVE ＊UNLOCK/RELEASE/ UNPLUG/UNCLAMP/ UNSOLDER
①	LCD Top Case	D16A	2 (S-1), 2 (S-2) ＊Locking Porsions
②	LCD Earth Plate	D16B	3(S-3)
③	LCD C.B.A.	D16C	(S-4) ＊Connector FP9001, FP9002,P9001, P9002 LCD Barrier, LCD Panel Unit
④	LCD Bottom Case Unit	D16D	(S-5)
⑤	Shaft Frame with Shatf Case Unit	D16E	4(S-6) ＊Connector P3
⑥	Relay C.B.A.	D16E	(S-7), ＊Connector P2
⑦	Shaft Frame	D16F	2(S-8) Shatf Case Unit
⑧	Rear Shaft Case	D16G	2(S-9)
⑨	Shaft Unit	D16G	2(S-10) Front Shaft Case, 14P Connector Unit

List of Abbreviations :
(S-1)=Screws(S-1)

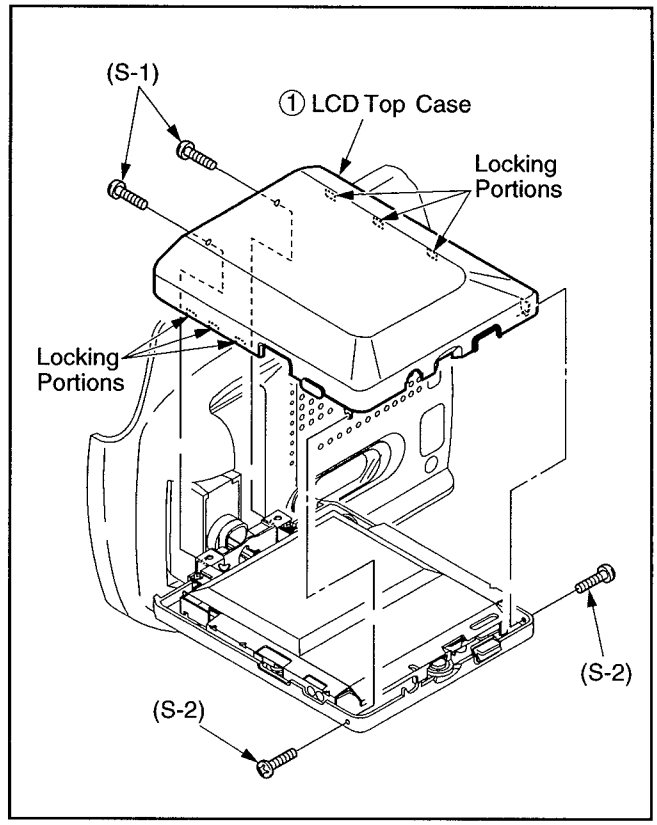


Fig. D16A

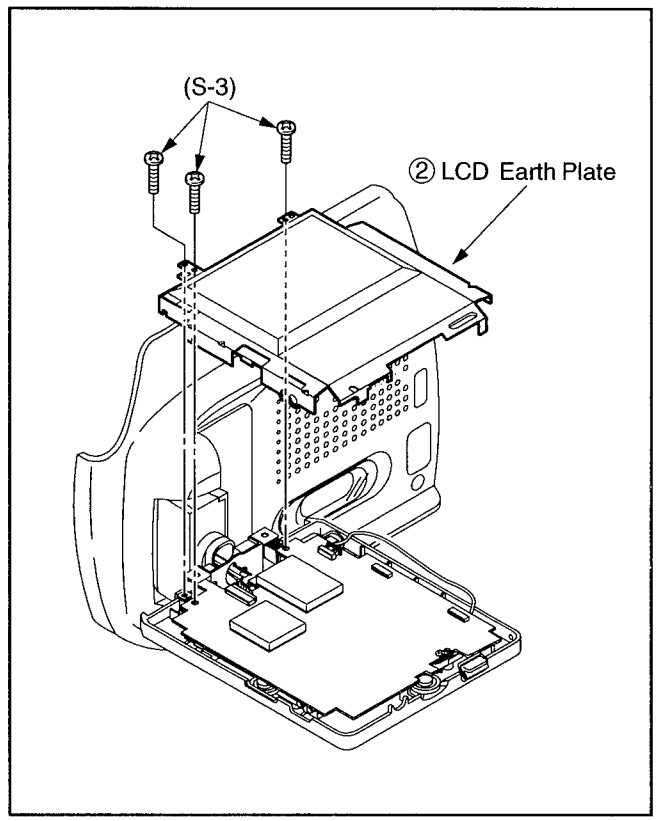


Fig. D16B

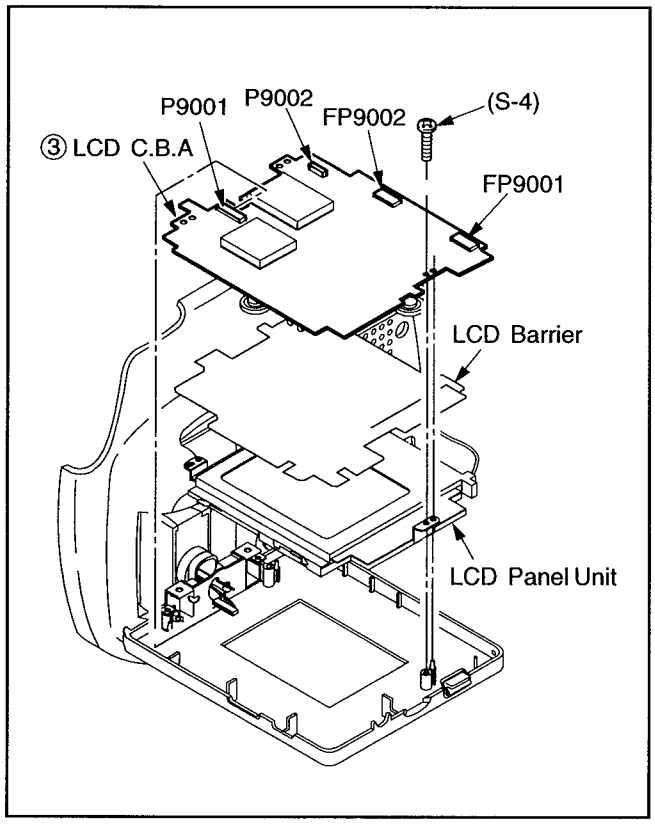


Fig. D16C

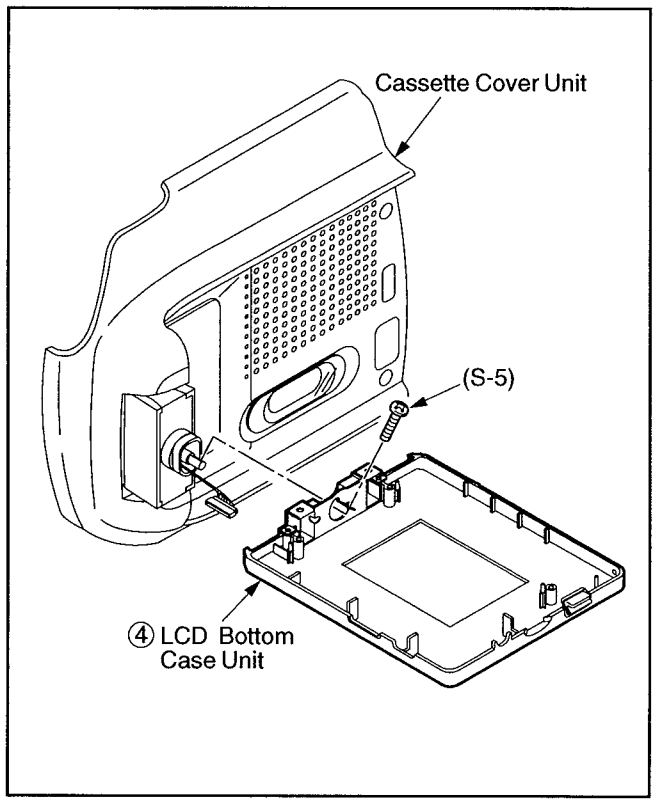


Fig. D16D

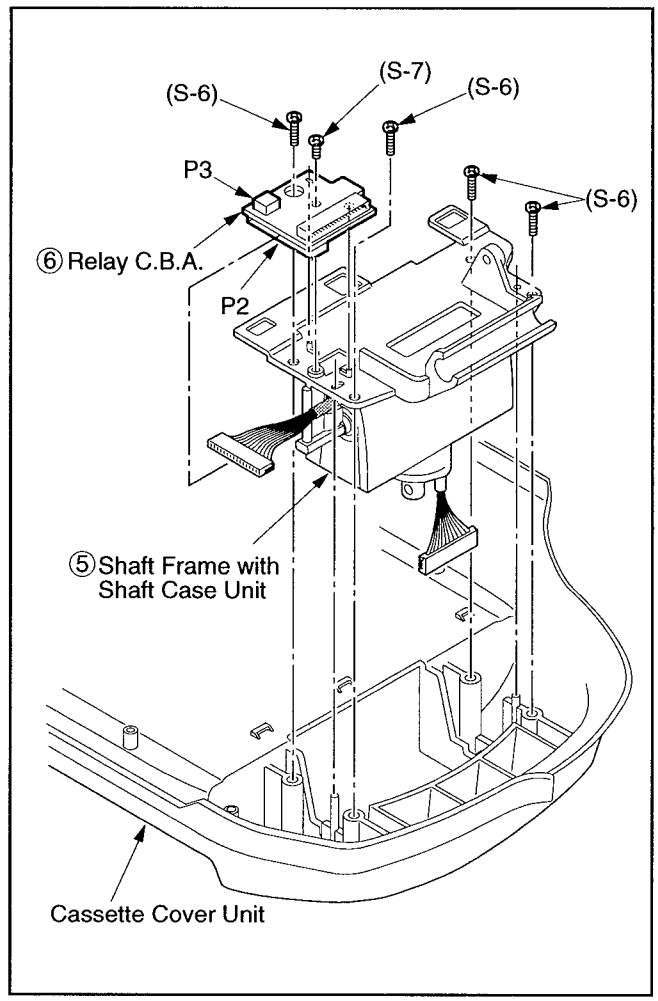
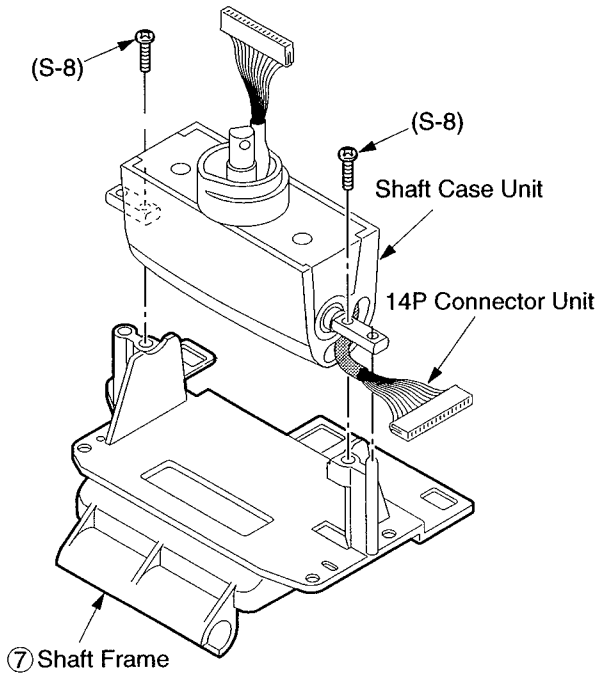


Fig. D16E

(Shaft Frame with Shaft Case Unit)



Note : When installing the Shaft Case Unit onto the Shaft Frame, the cable of 14P connector unit should be positioned on the cutout portion as shown.

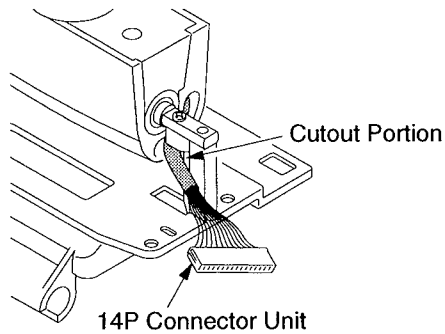
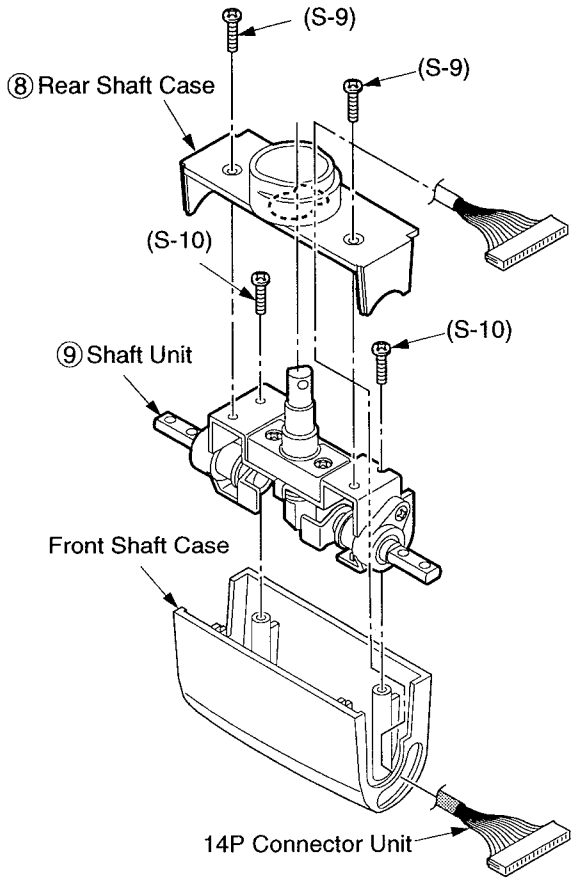


Fig. D16F

(Shaft Case Unit)



Note : When installing, make sure the 14P connector unit is correctly placed as shown.

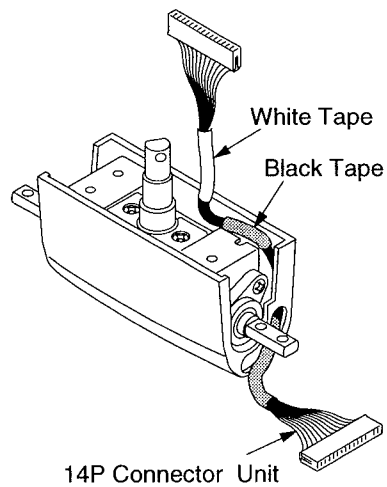


Fig. D16G

2-7. LIGHT UNIT

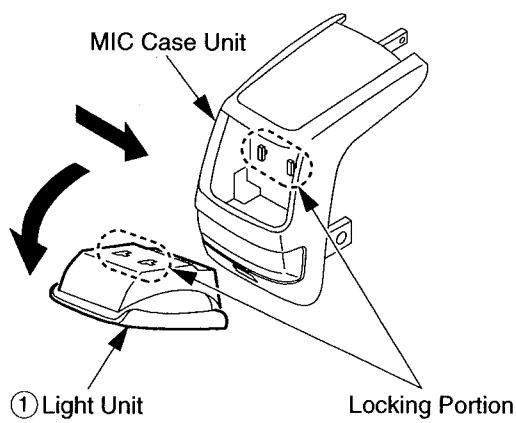
CAUTION :

While the Light Unit is ON, the body temperature of the Light Unit has been being will be very high. Confirm that the body temperature has dropped sufficiently before servicing the Light Unit.

STEP /LOC. No.	PART	Fig. No.	REMOVE * UNLOCK/RELEASE/ UNPLUG/UNCLAMP/ UNSOLDER
①	Light Unit	D17A	* Looking Portions
②	Lamp	D17B	Light Case,Lamp Socket

List of Abbreviations :

(S-1)=Screws(S-1)



(Locking Portion)

【REAR VIEW】

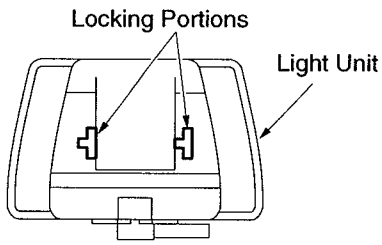
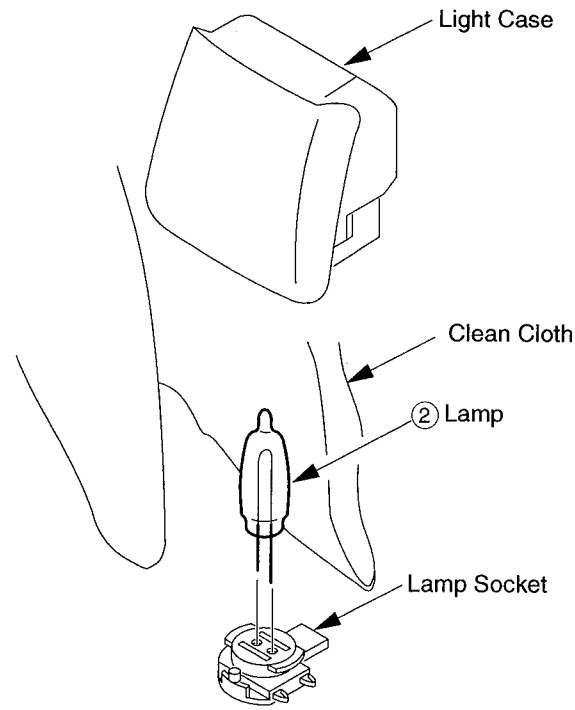
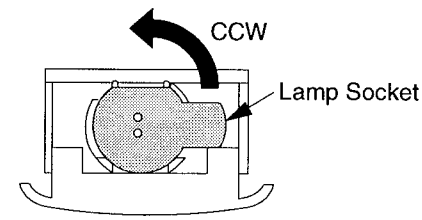


Fig. D17A

(Light Unit)



Note : When replacing the Lamp, do not touch the surface of Lamp directly.Use a clean cloth to install the Lamp.



Turn the Lamp Socket counterclockwise 90° and pull it from the Light Case.

Fig. D17B

2. PROCEDURE FOR CLEANING UPPER CYLINDER UNIT

1. Position the Video Head to permit access for cleaning, and hold the Upper Cylinder Unit to keep it from turning while cleaning.
2. Gently rub the Video Heads and Flying Erase Head in the direction of tape travel with a Head Cleaning Stick(VFK27) moistened with Isopropyl Alcohol 91%.
3. Repeat for the other Video Heads.

CAUTION :

All Isopropyl Alcohol 91% must be removed from the tape path after cleaning by using a dry Head Cleaning Stick(VFK27) or tape damage will occur.

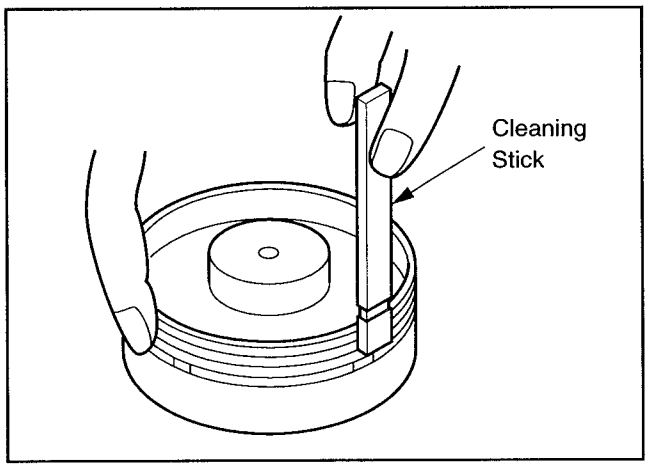


Fig. M1

Note :

1. Do not rub vertically.
2. Do not apply any pressure to the head. If contaminant is not easily removed, continued gentle wiping will usually remove it.
3. Clean the Cylinder Surface with Isopropyl Alcohol 91% if fingerprints are present after cleaning the Video Heads.

3. ADJUSTMENT PROCEDURES

1. CYLINDER REPLACEMENT

Work with extreme care when removing or replacing the Upper Cylinder Unit. Do not touch video heads and Flying Erase Head during servicing.

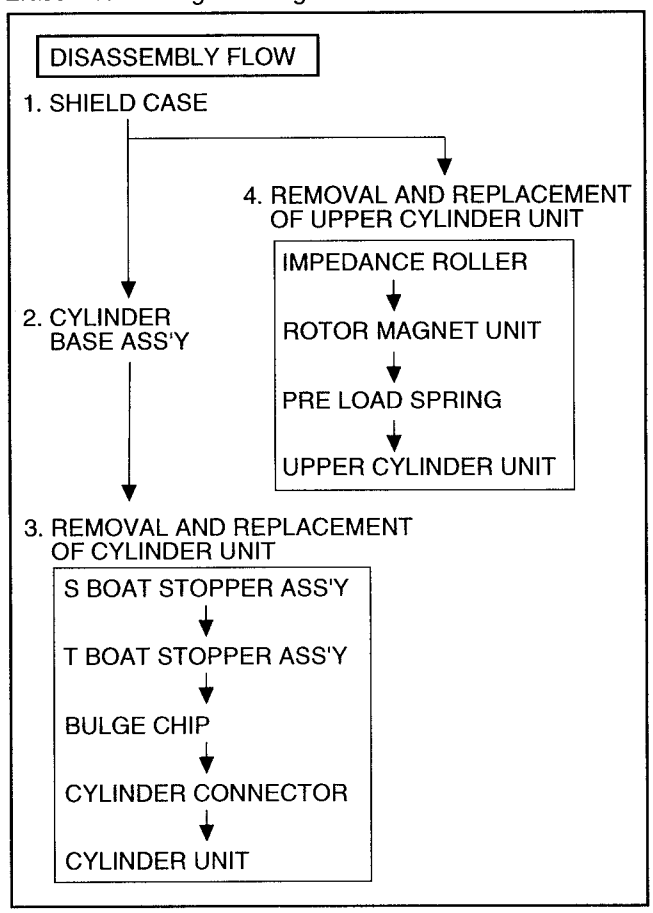


Fig. M2

1. REMOVAL OF SHIELD CASE

1. Remove the Screw-A and Shield Case.

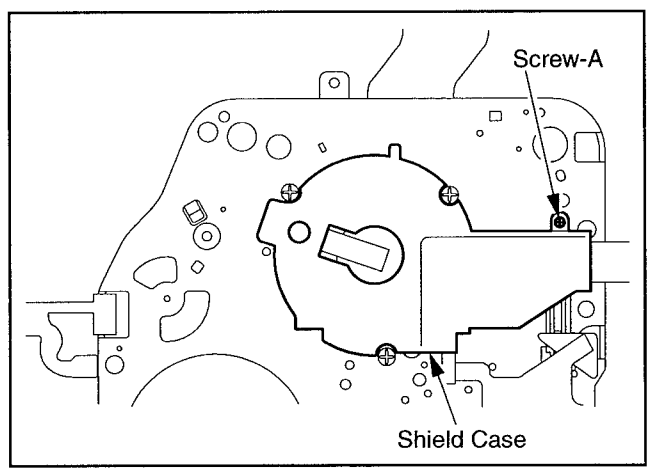


Fig. M3-1

2. REMOVAL OF CYLINDER BASE ASS'Y

1. Remove 3 Screws-B and gently lift the CYLINDER BASE ASS'Y.

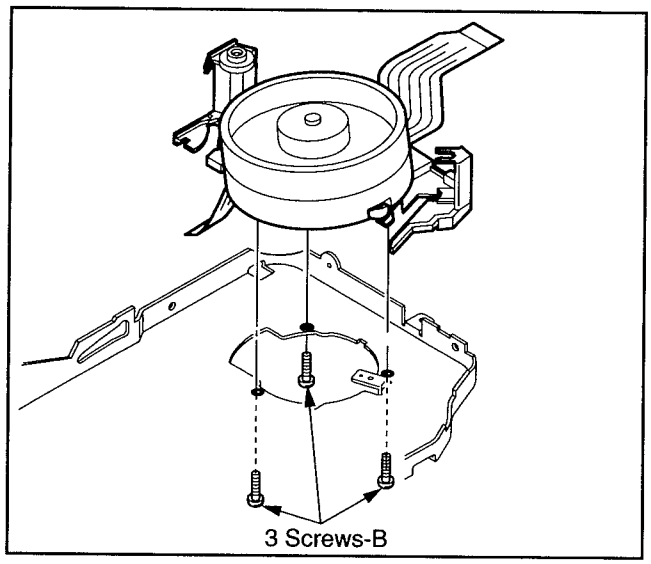


Fig. M3-2

Note : When removing the Cylinder Base Ass'y, perform the stop position.

3. REMOVAL AND REPLACEMENT OF CYLINDER UNIT

Work with extreme care when removing or replacing the Cylinder Unit. Do not touch Video Heads and Flying Erase Head during servicing.

1. Remove the Screw-C and S Boat Stopper Ass'y.
2. Remove the Screw-D and T Boat Stopper Ass'y.
3. Remove the Screw-E and Bulge Chip.
4. Remove the RT-S Flexible Cable.
5. Reinstall the S Boat Stopper Ass'y and T Boat Stopper Ass'y on the new Cylinder Unit.

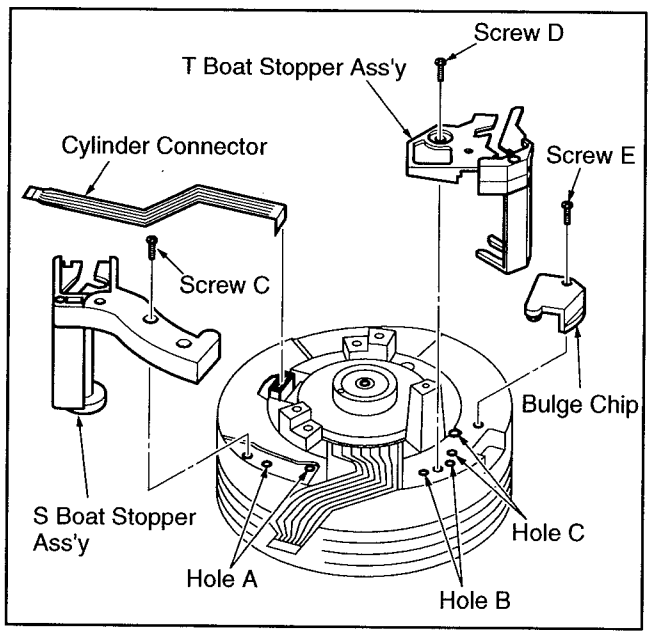


Fig. M3-3

Note :

1. Do not pull on the Flexible Cables coming from the Cylinder Unit.
2. Remove the Cylinder Unit gently and carefully.
3. Reinstall the new Cylinder Unit so that the 2 projections A on the S Boat Stopper Ass'y align with the 2 holes A on lower surface of the Cylinder Unit.
4. Reinstall the new Cylinder Unit so that the 2 projections B on the T Boat Stopper Ass'y align with the 2 holes B on lower surface of the Cylinder Unit.
5. Reinstall the new Cylinder Unit so that the 2 projections C on the Bulge Chip align with the 2 holes C on lower surface of the Cylinder Unit.
6. Do not touch the Heads on Upper Cylinder Unit. If touched then clean it with a Deerskin Swab (Cleaning Stick) saturated with Isopropyl Alcohol 91%. See CAUTION under "1. PROCEDURE FOR CLEANING UPPER CYLINDER UNIT" on page III-13.

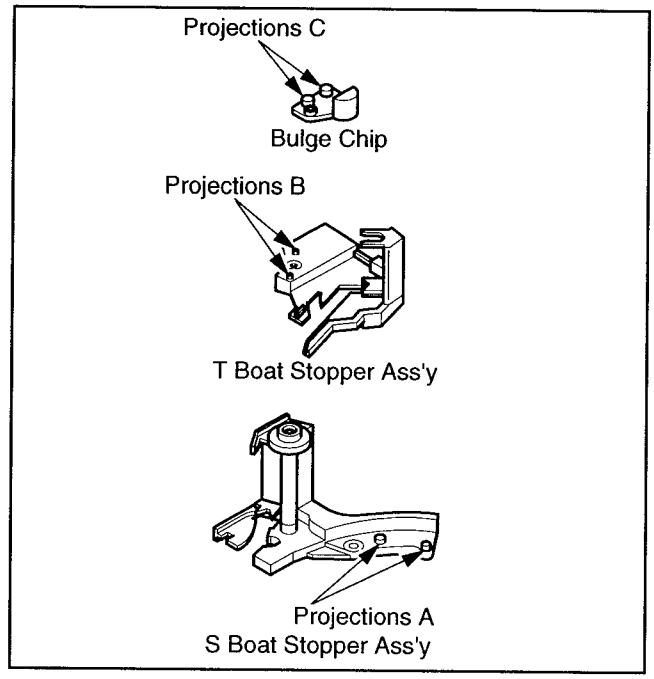


Fig. M3-4

4. REMOVAL AND REPLACEMENT OF UPPER CYLINDER UNIT

Work with extreme care when removing or replacing the Upper Cylinder Unit. Do not touch Video Heads and Flying Erase Head during servicing.

1. Remove the Screw-A and Shield Case.

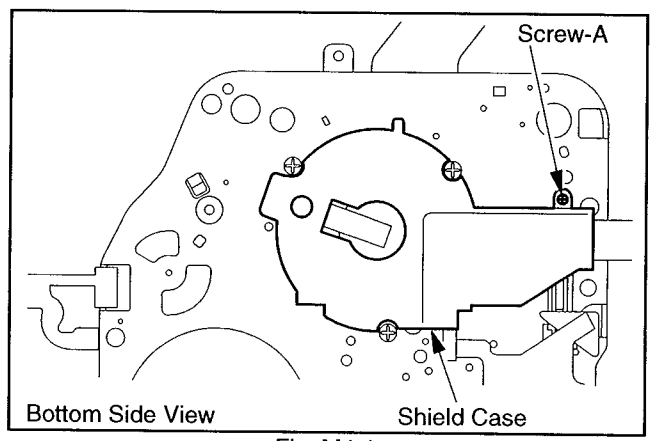


Fig. M4-1

2. Remove the cut washer, washer and Impedance Roller.

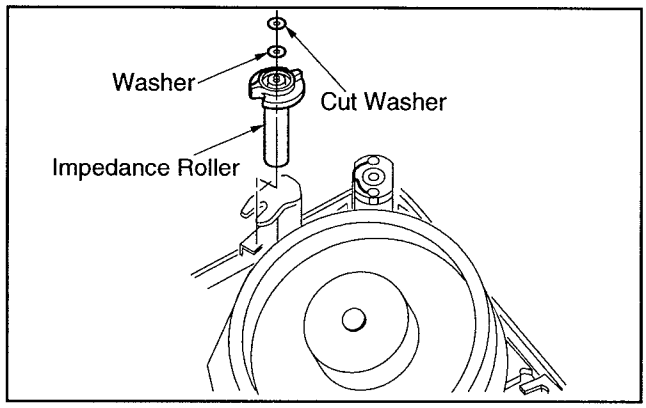


Fig. M4-2

3. Loosen Black Lock Screw-A on the Rotor Magnet unit by HEX WRENCH (1.2mm) and gently lift up the Upper Cylinder unit from the Cylinder Base Ass'y as shown in Fig. M4-3, M4-4.

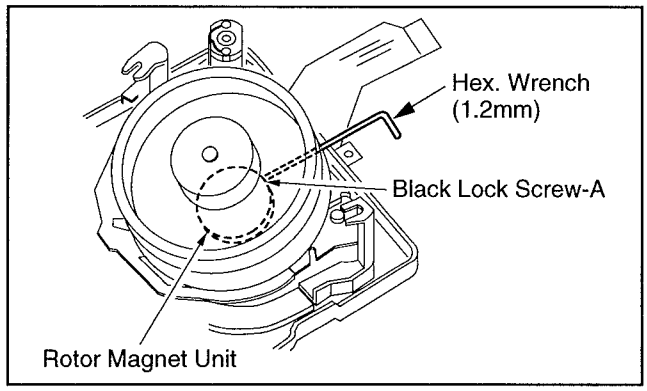


Fig. M4-3

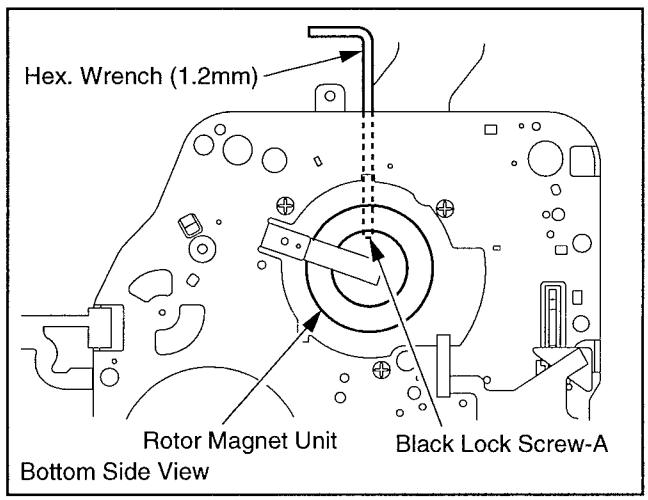


Fig. M4-4

4. Confirm and align position of both Pre-Load Spring and Rotor Magnet Unit at center of cylinder shaft hole as shown in Fig. M4-5.

5. Install the new Upper Cylinder unit on the Cylinder Base Ass'y gently.
When installing the new Upper Cylinder unit, keep position of the Rotor Magnet unit with your finger at center of cylinder shaft hole as shown in Fig. M4-5.

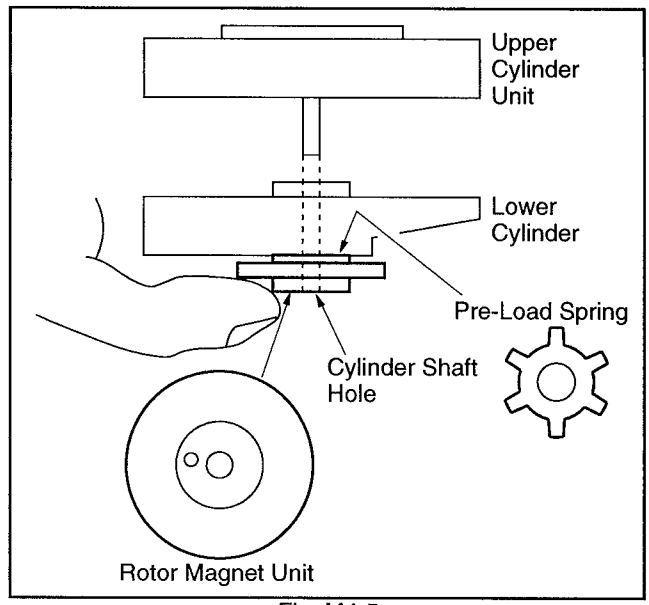


Fig. M4-5

6. Align the Hex Wrench (1.2mm) to the alignment mark A as shown in Fig. M4-6.

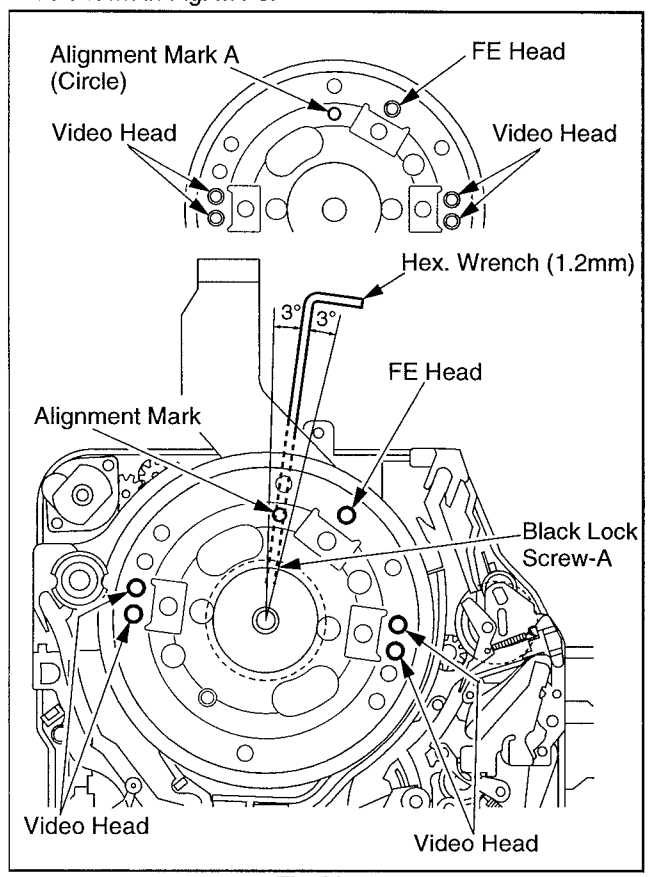


Fig. M4-6

Note : When tigntening the Black Lock Screw-A, lightly press (700g/cm^2) and hold the Cylinder Unit from both top and bottom sides with your fingers.

7. Reinstall the Impeadance Roller, washer and cut washer.

8. Reinstall the Shield Case and Screw-A.

9. Clean the Upper Cylinder and Impedance Roller with a Deerskin Swab (Cleaning Stick) saturated with Isopropyl Alcohol 91% see CAUTION under "1. PROCEDURE FOR CLEANING UPPER CYLINDER UNIT" on page III-13.

Note : Upon completion of replacement confirm performance. If required, perform "3-4. HORIZONTAL POSITION ADJUSTMENT OF A/C HEAD" on page III-18.

5. REINSTALLATION OF CYLINDER UNIT

1. Reinstall gently the Cylinder Unit and 3 Screws-B.

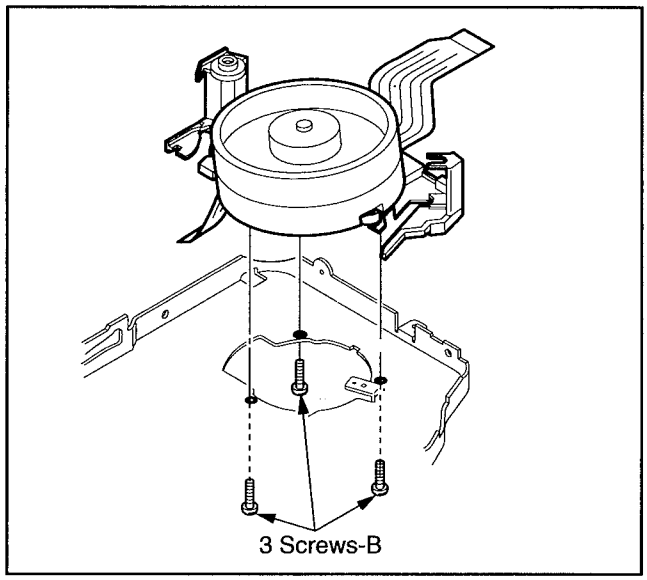


Fig. M5-1

6. REINSTALLATION OF SHIELD CASE

1. Install the Screw-A and Shield Case.

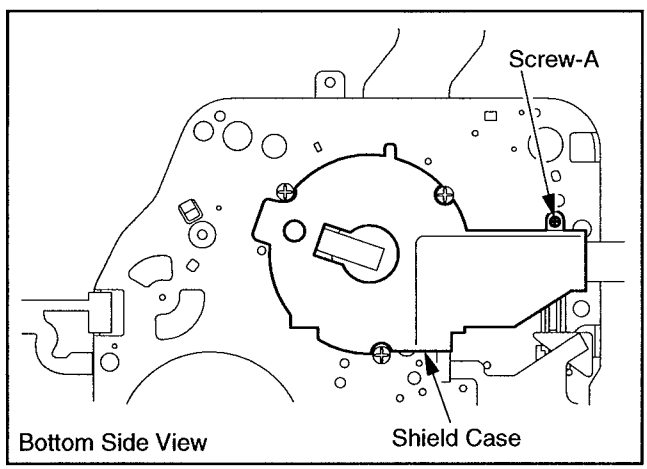


Fig. M5-2

Note:

1. Do not touch Heads and Tape Path. If they are touched then clean it with a Deerskin Swab (Cleaning Stick) saturated with Isopropyl Alcohol 91%. See CAUTION under "1. PROCEDURE FOR CLEANING UPPER CYLINDER" on page III-13.
2. After replacing the Cylinder unit, confirm the loading posts movement by apply a DC voltage to the Loading Motor. (Refer to "C. How to Remove a Jammed Tape" in Service Caution Section.)
3. Upon completion of Replacement Procedure, confirm performance.
   If any further maintenance is required, perform "3. TAPE INTERCHANGEABILITY" with the alignment tape VFMS0004H6C on page III-16.

2. HEIGHT ADJUSTMENT OF TAPE GUIDE POSTS (PRELIMINARY ADJUSTMENT)

Purpose:
To properly align the position of the tape with the Cylinder Lead so that the tape runs with stability.

Symptom of Misadjustment:
1) Since the Envelope Waveform Signal can not be tracked properly, the Playback picture will be poor.
2) Since the tape will not run stable, the tape will eventually be damaged.
3) Tape interchangeability is poor.

* Equipment Required:
Thickness Gauge ..... (Purchase Locally)
Hex. Wrench Set ..... (VFK0326)

2-1. HEIGHT ADJUSTMENT OF S AND T POSTS

* Specification :
S2 Post, T2 Post ..... 2.0 ± 0.1mm

1. Turn top of post with Hex. Wrench (1.5mm), slightly in either direction as necessary to the correct clearance as shown in Fig. M6.

Note :
For measurement of S and T posts height, use a Thickness Gauge.

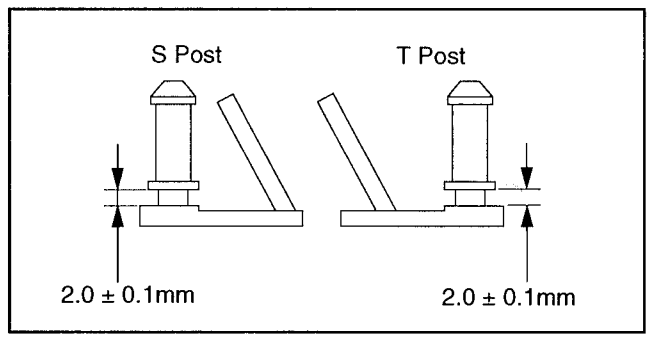


Fig. M6

3. TAPE INTERCHANGEABILITY ADJUSTMENT(FINAL ADJUSTMENT)

Note :

1. To perform these adjustment/confirmation procedures, make sure that the Tracking Control is set in the Neutral position. (Put the unit into the service mode "I. TRACKING FIX".) Refer to the B. Service Mode Specification on Page II-12.
2. Before these Adjustment/Confirmation procedures, remove the Protective Tape Cover from the Cassette Tape or the Alignment Tape (VFMS0004H6C).

* Equipment Required :
  Thickness Gauge (Purchase Locally.)
  Dual Trace Oscilloscope
  VHS-C Alignment Tape
  (VFMS0004H6C, VFMW0001C, VFMW0002C)
  Hex. Wrench Set (VFK0326)
  Lock Screwdriver (VFKS0069)
  TP Adjustment Tool Kit (VFKW0123)

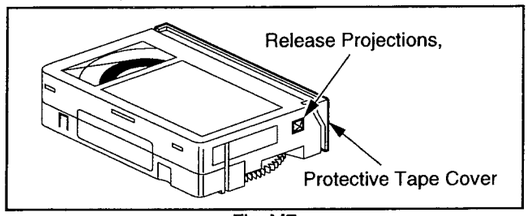


Fig. M7

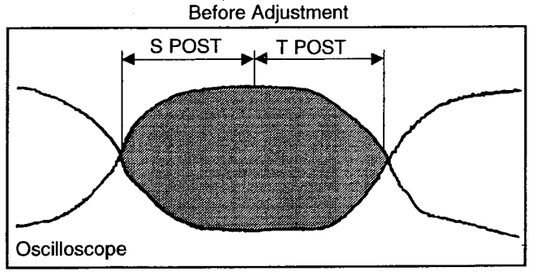
3-1. CONFIRMATION OF S AND T POSTS HEIGHT

Purpose:
To make sure that the tape run is well stabilized.

Symptom of Misadjustment:
If the tape travels with instability, the tape will be damaged.

1. Connect oscilloscope at pin 32 of S101 TP Adjustment PCB/ VFKW0123B.
   See Electrical Adjustment .
   Use pin 33 of S101 as a trigger.
2. Put the unit into the service mode "I. TRACKING FIX" to Defeat Auto Tracking. (Refer to the B. Service Mode Specification on page II-12).
3. Playback monoscope portion of the alignment tape.
4. Turn S Post by turning the top of post with a 1.5mm Hex. Wrench so that left half of envelope signal at pin 32 of S101 becomes flat as possible.
5. Turn T post so that right of envelope signal at pin 32 of S101 becomes flat as possible.

Before Adjustment



After Adjustment

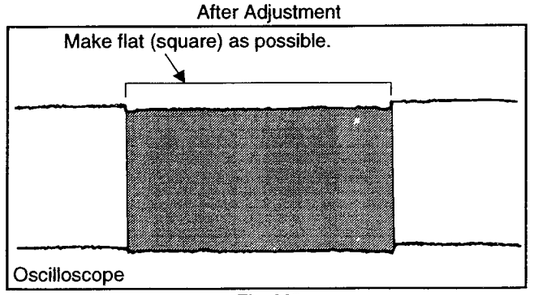


Fig. M8

6. After adjustment, confirm that the tape travels without curing at S and T posts.
   If curing is apparent, readjust the height of posts.

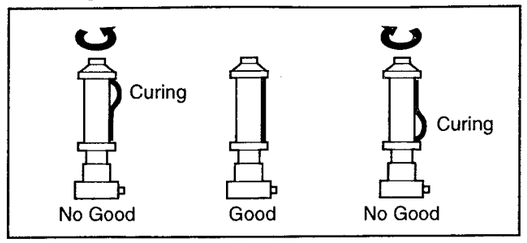


Fig. M9

3-2. HEIGHT ADJUSTMENT OF A/C HEAD

A/C Head Replacement Part Assembly Height has already been adjusted at the factory.

Purpose:
To make sure the tape runs properly along the Control Head.

Symptom of Misadjustment:
If the control signal is not properly picked up, Servo Operation can not be achieved.

This adjustment is required when the A/C Head is replaced.

1. Playback alignment tape VFMW0001C and monitor the Control Signal at pin 25 of S101 by oscilloscope.
2. Then adjust Screw A (height) on the A/C head so that the sub control signal becomes 500 ± 200mV.

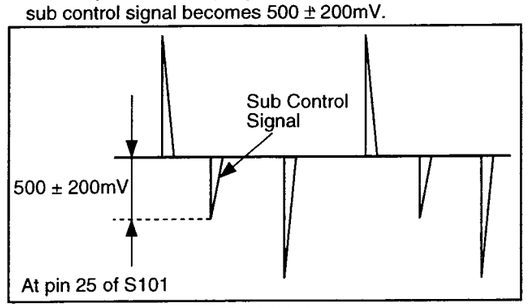


Fig. M10-1

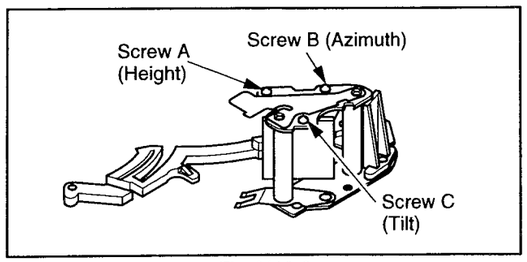


Fig. M10-2

3-3. AZIMUTH ADJUSTMENT OF A/C HEAD

Purpose:
To adjust the position and height of the A/C Head so that it meets the tape tracks properly.

Symptom of Misadjustment:
If the position of the A/C Head is not properly adjusted, the Audio S/N Ratio will be poor.

1. Connect oscilloscope to audio output jack.
2. Playback monoscope portion (6kHz, Mono) of alignment tape. (VFMS0004H6C)
3. Adjust screw B on the A/C head so that the output level of audio becomes its maximum.

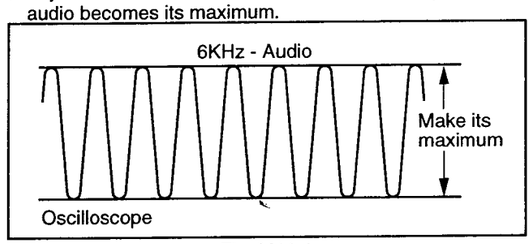


Fig. M11-1

After adjustment, press the tape a little at in front and behind the A/C head and if the output audio level is increased more, turn screw C (tilt) on the A/C head 90 - 180 degrees in counterclockwise to get the maximum audio.

4. Confirm and readjust Screw A (height) on the A/C head so that the sub control signal becomes 500 ± 200mV.
5. Confirm and readjust Screw B (azimuth) on the A/C head so that the output audio becomes is maximum.
6. Confirmation of Playback Audio in SLP Mode.
   After A/C head adjustment, playback alignment tape VFMW0002C and confirm control signal at pin 25 of S101 and output audio at AV jack.
   Use trigger at pin 33 of S101 (Head SW signal).

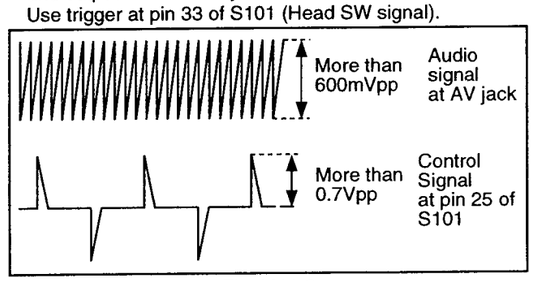


Fig. M11-2

3-4. HORIZONTAL POSITION ADJUSTMENT OF A/C HEAD

Purpose:
To adjust the Horizontal Position of the A/C Head.

Symptom of Misadjustment:
If the Horizontal Position of the A/C Head is not properly adjusted, maximum envelope can not be obtained at the Neutral Position of the Tracking Control Circuit.

1. Connect oscilloscope at pin 32 of S101 on TP Adjustment PCB / VFKW0123B.
2. Put the Unit into the service mode "I. TRACKING FIX" to fix tracking position. (Refer to the B. Service Mode Specification on Page II-12.)
3. Playback monoscope signal of alignment tape. (VFMS0004H6C)
4. Adjust Adjustment AC Adjust Base on the AC Head Unit with the big screwdriver so that envelope signal become its center of maximum period.
5. Before finding the center of the maximum period of the envelope, rotate the fixture back and forth slightly to confirm the limits on either side of the maximum period.

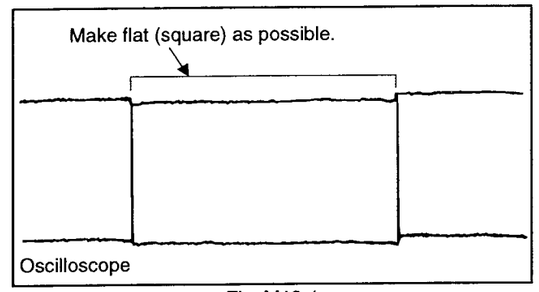


Fig. M12-1

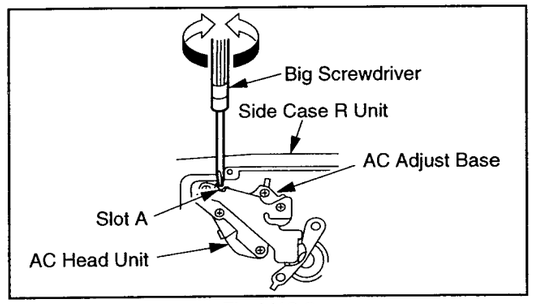


Fig. M12-2

3-3. AZIMUTH ADJUSTMENT OF A/C HEAD

Purpose:
To adjust the position and height of the A/C Head so that it meets the tape tracks properly.

Symptom of Misadjustment:
If the position of the A/C Head is not properly adjusted, the Audio S/N Ratio will be poor.

1. Connect oscilloscope to audio output jack.
2. Playback monoscope portion (6kHz, Mono) of alignment tape. (VFMS0004H6C)
3. Adjust screw B on the A/C head so that the output level of audio becomes its maximum.

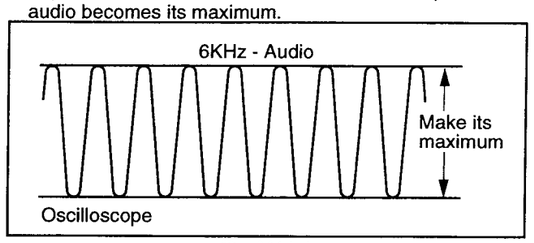


Fig. M11-1

After adjustment, press the tape a little at in front and behind the A/C head and if the output audio level is increased more, turn screw C (tilt) on the A/C head 90 - 180 degrees in counterclockwise to get the maximum audio.

4. Confirm and readjust Screw A (height) on the A/C head so that the sub control signal becomes 500 ± 200mV.
5. Confirm and readjust Screw B (azimuth) on the A/C head so that the output audio becomes is maximum.
6. Confirmation of Playback Audio in SLP Mode.
   After A/C head adjustment, playback alignment tape VFMW0002C and confirm control signal at pin 25 of S101 and output audio at AV jack.
   Use trigger at pin 33 of S101 (Head SW signal).

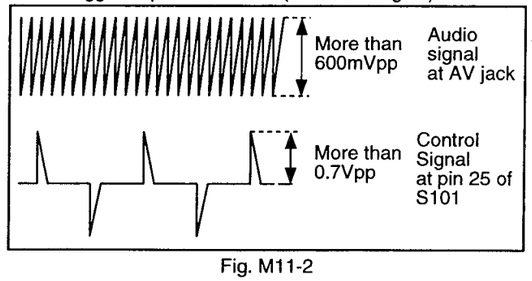


Fig. M11-2

3-4. HORIZONTAL POSITION ADJUSTMENT OF A/C HEAD

Purpose:
To adjust the Horizontal Position of the A/C Head.

Symptom of Misadjustment:
If the Horizontal Position of the A/C Head is not properly adjusted, maximum envelope can not be obtained at the Neutral Position of the Tracking Control Circuit.

1. Connect oscilloscope at pin 32 of S101 on TP Adjustment PCB / VFKW0123B.
2. Put the Unit into the service mode "I. TRACKING FIX" to fix tracking position. (Refer to the B. Service Mode Specification on Page II-12.)
3. Playback monoscope signal of alignment tape. (VFMS0004H6C)
4. Adjust Adjustment AC Adjust Base on the AC Head Unit with the big screwdriver so that envelope signal become its center of maximum period.
5. Before finding the center of the maximum period of the envelope, rotate the fixture back and forth slightly to confirm the limits on either side of the maximum period.

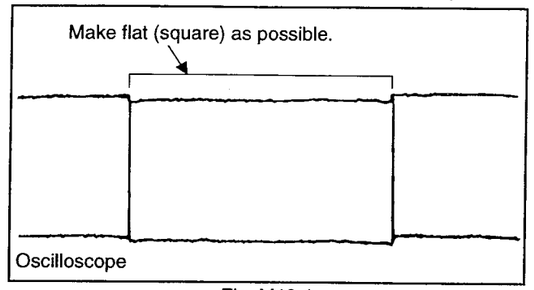


Fig. M12-1

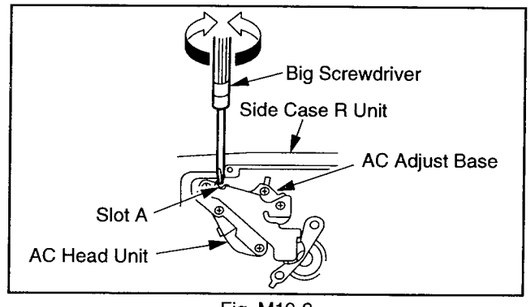


Fig. M12-2

3-5. CONFIRMATION/ADJUSTMENT OF ENVELOPE OUTPUT

Purpose:
To achieve a satisfactory picture and secure precise tracking.

Symptom of Misadjustment:
If the envelope is output poorly, much noise will appear in the picture. Then the tracking will lose precision and the playback picture will be distorted by any slight variation of the tracking control circuit.

1. Place the Unit into the service mode "I. TRACKING FIX" to set tracking to the Neutral Position. (Refer to the B. Service Mode Specification on Page II-12.)
   Connect the Oscilloscope at pin 32 of S101 on TP Adjustment PCB / VFKW0123B.
2. Playback the monoscope portion of the Alignment Tape(VFMS0004H6C) and adjust the height of posts S2 and T2 watching the scope display so that the envelope becomes as flat as possible.
   (V1/V-max≥0.7)

   If adjustment is required, turn top of post with Hex Wrench (1.5mm). For adjustment of S2 and T2, refer to Item 3-1.

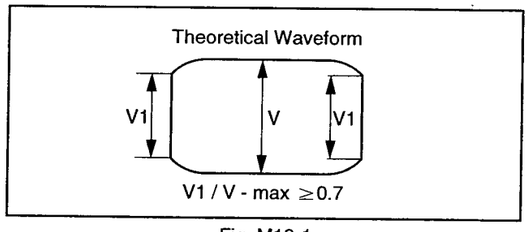


Fig. M13-1

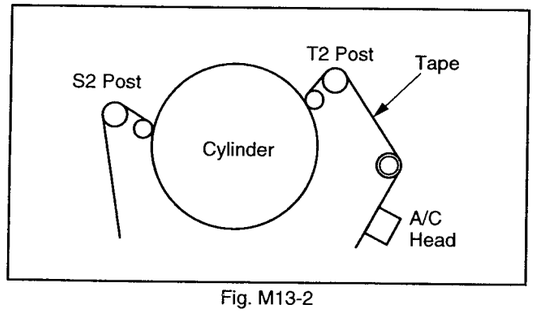


Fig. M13-2

3. When the scope display is as shown in Fig. M13-3, adjust the height of S2 so that the waveform looks like Fig. M13-5.

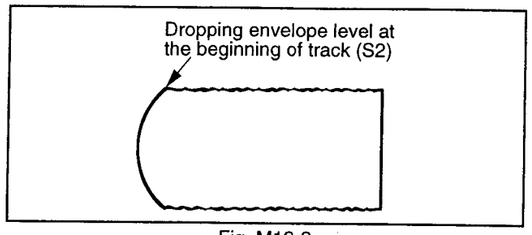


Fig. M13-3

4. When the scope display is as shown in Fig. M13-4, adjust the height of T2 so that the waveform looks like Fig. M13-5.

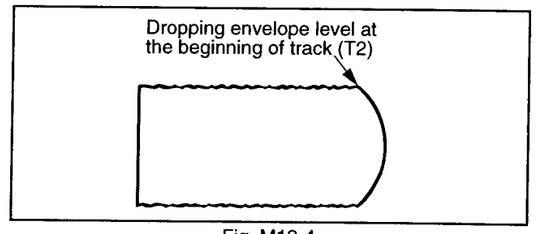


Fig. M13-4

5. When S2 and T2 are adjusted properly, there is no Envelope Drop at the beginning or end of the track as shown in Fig. M13-5.

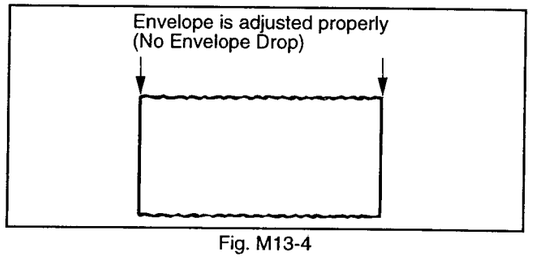


Fig. M13-4

Note :
Then confirm the Horizontal Position of A/C Head by alternately pushing the Select(Tracking Up) or Set(Tracking Down) Buttons in the playback mode, to check the symmetry of the envelope. And if required, perform "Horizontal Position Adjustment of A/C Head".

4. DISASSEMBLY/ASSEMBLY PROCEDURES OF MECHANISM

This procedure starts with the condition that the cabinet parts, Main C.B.A. and Cassette Up Unit have been removed.
When reassembling, perform the step(s) in the reverse order.

STEP LOC. No.	START -ING No.	PART	Fig. No.	REMOVE ＊UNHOOK/UNLOCK /RELEASE/UNPLUG/UNSOLDER
①	1	Cassette Up Ass'y	DM3	2(S-1) ＊Locking Portions
②	1	Safety Tab Lever	DM4	(P-1) ＊Hooking Portions
③	1	Tension Arm Unit	DM5	(C-1)
④	1	Tension Release Arm Ass'y	DM6	2(C-2),(W-1),(P-2) ＊Hooking Portion
⑤	1	Eject Arm Unit	DM7	(P-3) ＊Hooking Portions
⑥	1	T Reel Gear	DM8	(C-3)
⑦	1	Play Clutch Unit	DM8	(C-4),(P-4) ＊Hooking Portions
⑧	8	Shield Case	DM9	(S-2)
⑨	8	Earth Brush	DM9	(S-3)
⑩	10	Cylinder Base Ass'y	DM10	3(S-4)
⑪	1	Mechanism Chassis F.P.C.	DM11	6(S-5)
⑫	1	S Boat Ass'y	DM12	----------
⑬	1	Link Arm	DM12	(C-5)
⑭	1	T Boat Ass'y	DM12	----------
⑮	1	S Rail Unit	DM13	(S-6)
⑯	1	T Rail	DM13	(S-7)
⑰	17	Loading Motor Ass'y	DM14	2(S-8)
⑱	1	T3 Drive Lever Unit	DM15	(S-9)
⑲	1	T3 Arm Ass'y	DM16	(P-5),(C-6)
⑳	1	T3 Base Ass'y	DM17	2(S-10),(S-11) ＊Unsolder
㉑	1	T3 Pressure Lever Unit	DM17	----------
㉒	1	Pinch Base Ass'y	DM18	(P-6) ＊Hooking Portions
㉓	1	T4 Arm Unit	DM18	(W-2)
㉔	1	Rev Idler Gear	DM19	----------
㉕	1	Capstan Ass'y	DM19	2(S-12),(S-13),3(Capstan Spacer)
㉖	1	Center Gear Unit	DM19	(C-7)
㉗	1	Idler Ass'y	DM19	----------
㉘	1	T3 Height Spring	DM20	(S-14)
㉙	1	Pinch Swing Lever	DM20	----------
㉚	1	Mode Switch	DM21	(S-15)
㉛	1	Motor Reduction Gear	DM22	----------
㉜	1	Ring Ass'y	DM23	5(S-16)

List of Abbreviations:
(P-1)=Spring(P-1),2(S-1)=2 Screw(S-1);
(W-1)=Washers(W-1);(C-1)=Cut Washer(C-1)

Note:
Removed Cut Washer is not reusable.
If removed, install a new one.

STEP LOC. No.	START -ING No.	PART	Fig. No.	REMOVE ＊UNHOOK/UNLOCK /RELEASE/UNPLUG/UNSOLDER
㉝	1	Switch Intermediate Gear	DM24	----------
㉞	1	T3 Cam Gear	DM25	----------
㉟	1	T Intermediate Gear	DM25	(C-8)
㊱	1	T Loading Gear Ass'y	DM25	----------
㊲	1	Intermediate Gear A	DM25	----------
㊳	1	Cam Gear	DM26	----------
㊴	1	S Loading Gear Ass'y	DM26	(C-9)
㊵	1	Intermediate Gear B	DM26	----------
㊶	1	S Ring	DM27	----------
㊷	1	Damper Rack	DM28	----------
㊸	10	S Boat Stopper Ass'y	DM29	(S-17)
㊹	10	T Boat Stopper Ass'y	DM29	(S-18)
㊺	10	Bulge Chip	DM29	(S-19)
㊻	10	Cylinder Connector	DM29	＊Locking Portions

INNER PARTS LOCATION

TOP VIEW

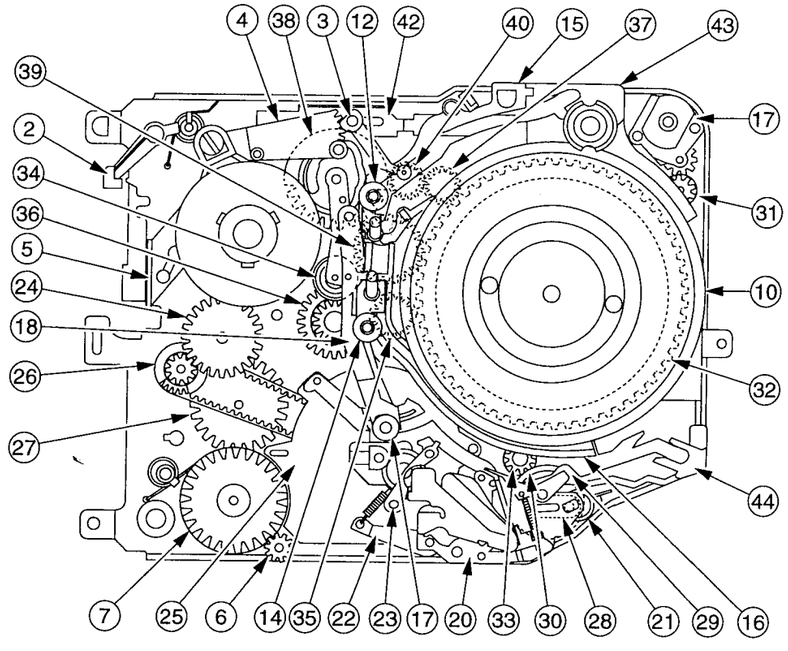


Fig. DM1

BOTTOM VIEW

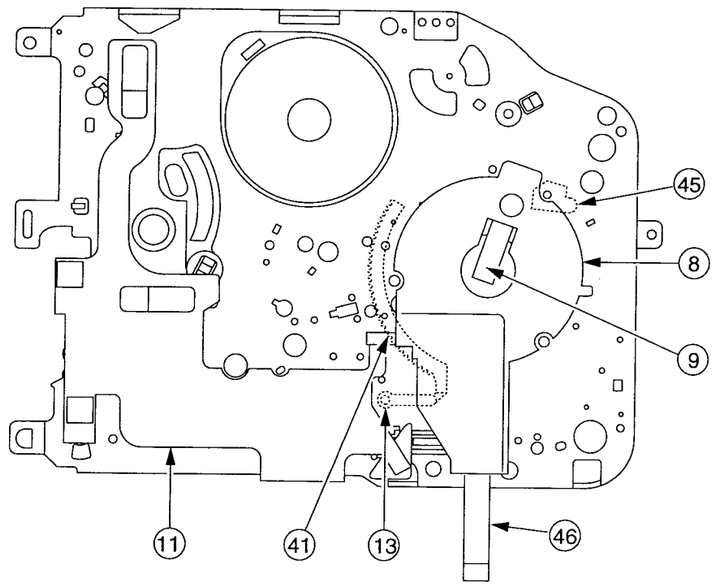
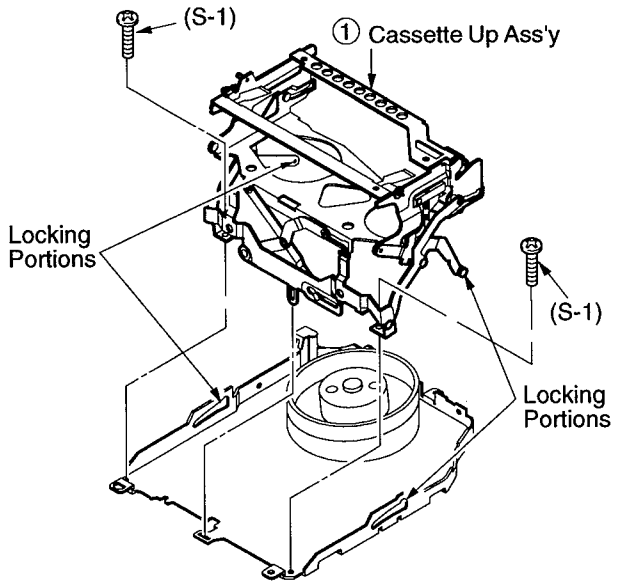
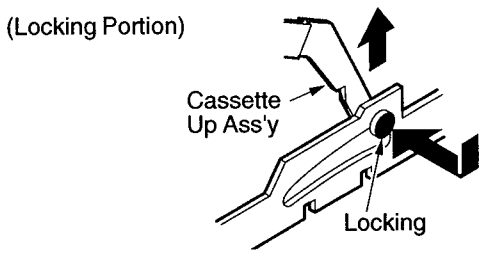


Fig. DM2

PARTS | **① Cassette Up Ass'y**

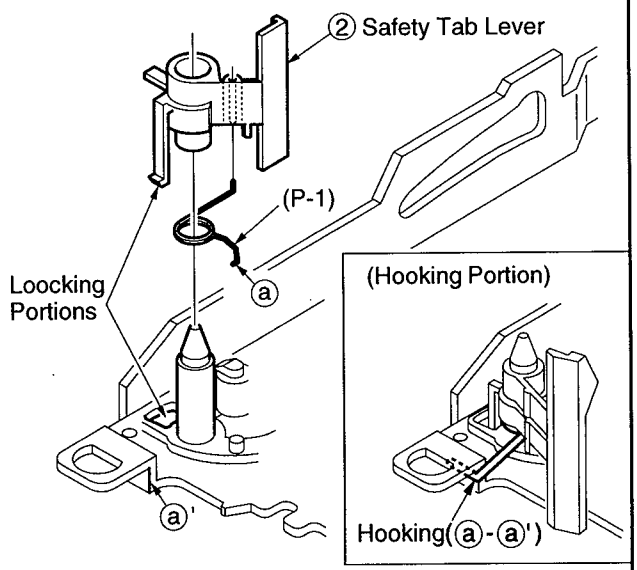




Note: Before removing the Cassete Up Ass'y, place the Unit in the Cassette up position.

Fig. DM3

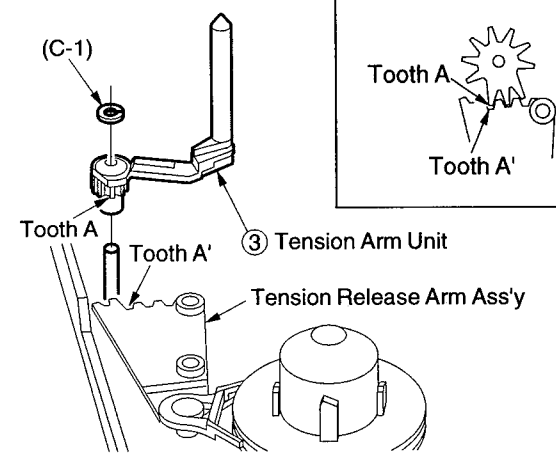
PARTS | **② Safety Tab Lever**



Note : When installing (P-1), refer to Fig. DM4 (Hooking Portion).

Fig. DM4

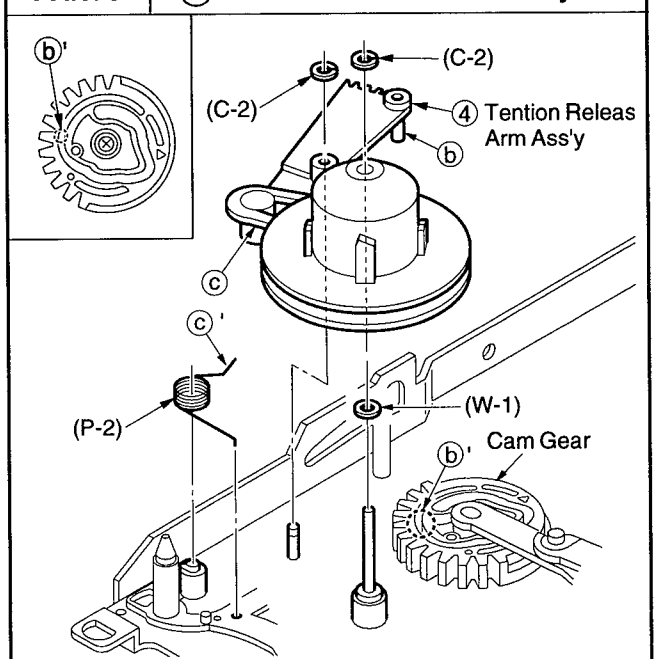
PARTS | **③ Tension Arm Unit**



Note: Install Tension Arm Unit so that Tooth A meets Tooth A' on Tension Release Arm Ass'y.

Fig. DM5

PARTS | **④ Tension Release Arm Ass'y**



Note : Install Tension Release Arm Ass'y so that ⓑ portion meets ⓑ' portion on Cam Gear. Then install (P-2) and hook hooking Potrion (ⓒ-ⓒ') as shown in Fig. DM6 (Hooking Portion).

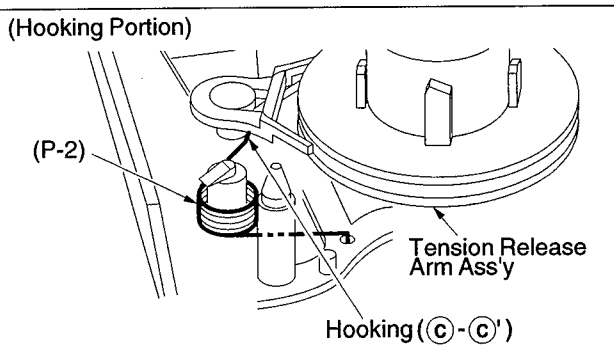
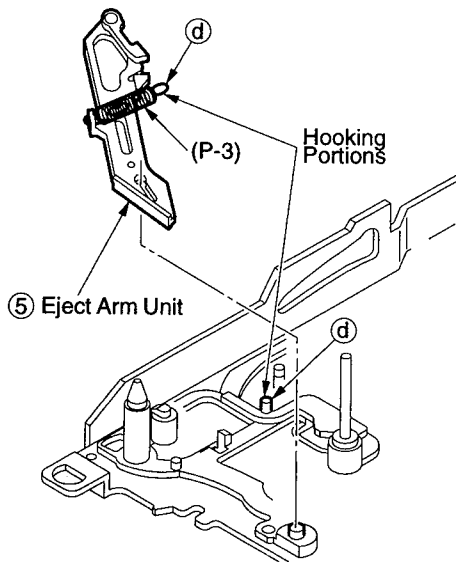
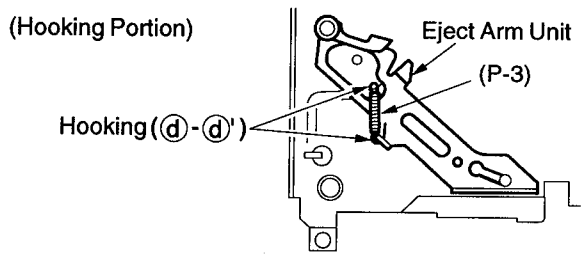


Fig. DM6

PARTS	⑤ Eject Arm Unit

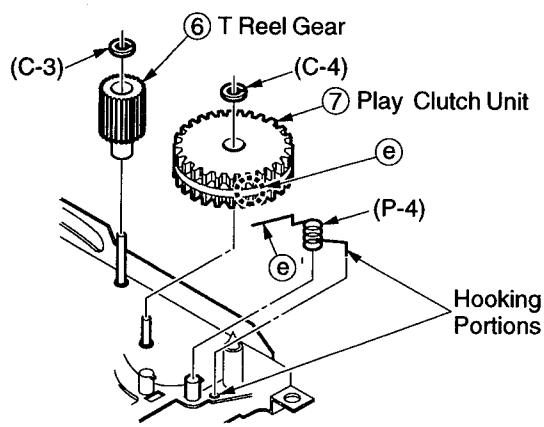




Note : When installing (P-3), refer to Fig.DM7 (Hooking Portion).

Fig. DM7

PARTS	⑥ T Reel Gear ⑦ Play Clutch Unit



Note : Install play Clutch Unit so that ⓔ portion on play Clutch Unit meets ⓔ' portion.

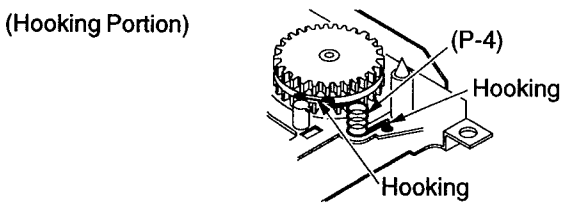


Fig. DM8

PARTS	⑧ Shield Case ⑨ Earth Brush

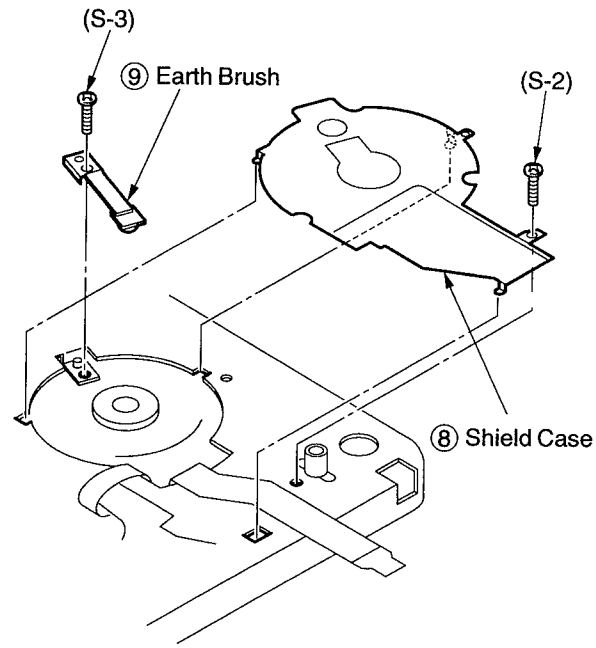


Fig. DM9

PARTS	⑩ Cylinder Base Ass'y

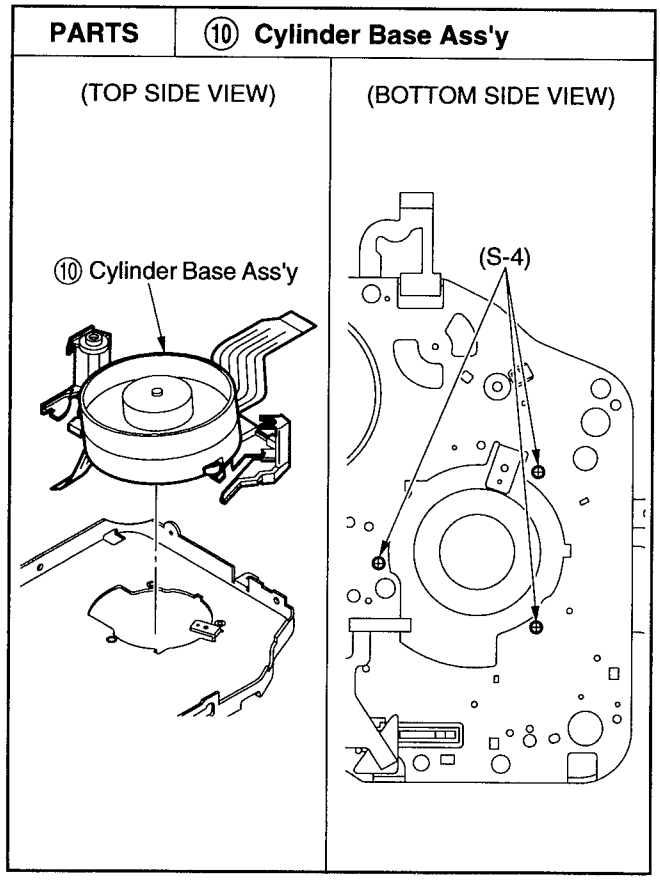


Fig. DM10

PARTS	⑪ Mechanism Chassis F.P.C.

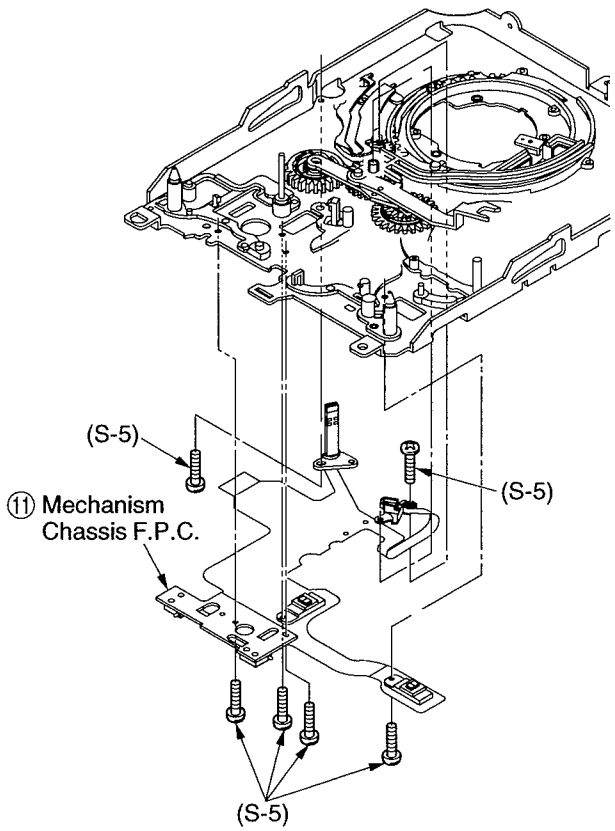
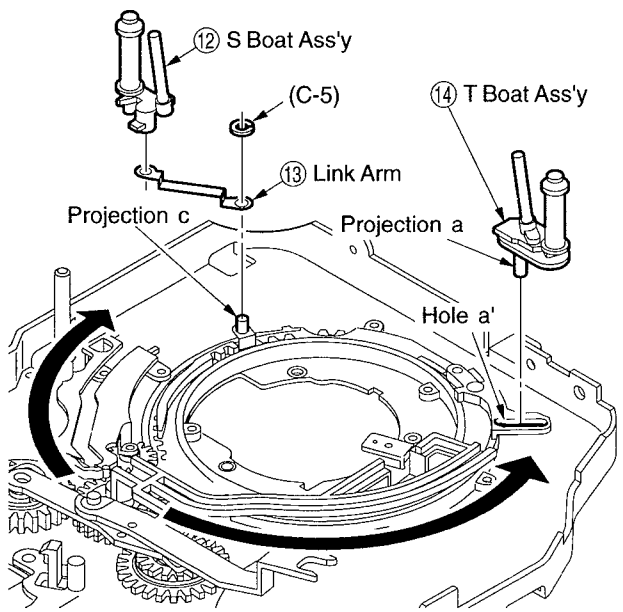


Fig. DM11

PARTS	⑫ S Boat Ass'y ⑬ Link Arm ⑭ T Boat Ass'y



Note : When removing the S and T Boat Ass'y,apply DC +3V to the Loading Motor and shift from Stop Position to Loading Position as shown in Fig.DM12.

Fig. DM12

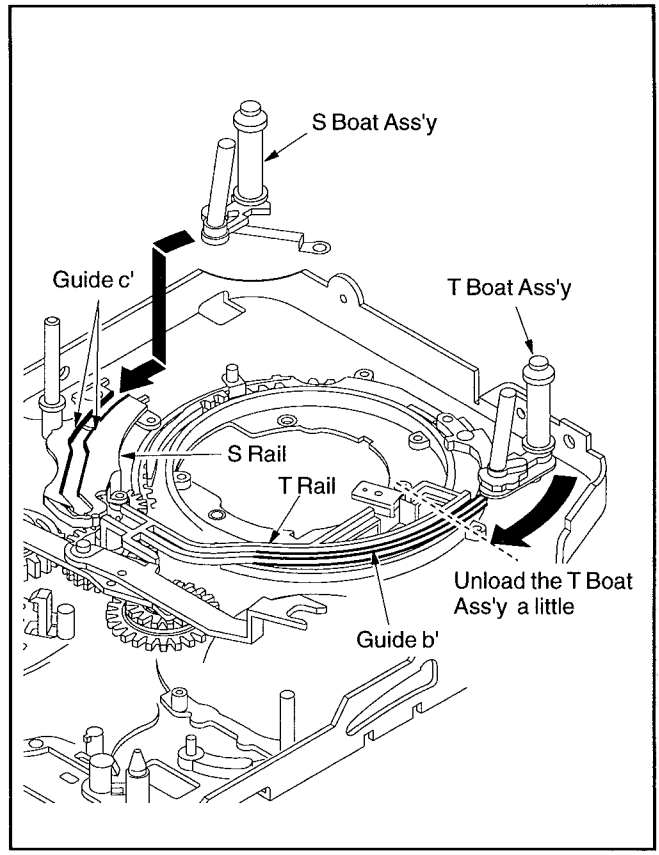


Fig. DM12-1

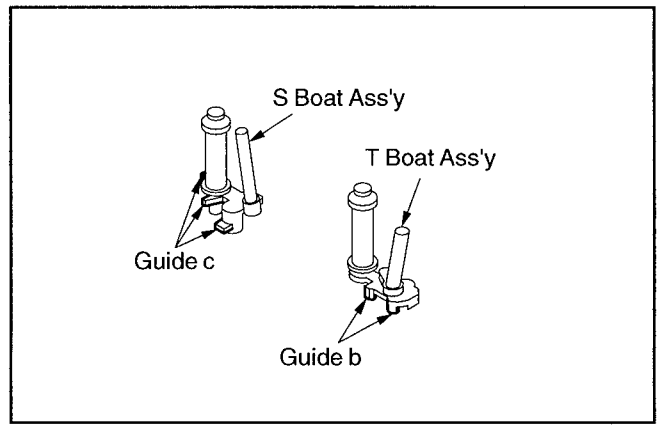


Fig. DM12-2

INSTALLATION OF S BOAT ASS'Y AND T BOAT ASS'Y

1. Install the T Boat Ass'y so that the projection (a) under T Boat Ass'y align with hole (a') on the T Ring Unit as shown in Fig.DM12.
2. Unload the T Boat Ass'y a little with applying DC +4V to the Loading Motor and align the Guide (b) of T Boat Ass'y to the Guide (b') T Rail as shown in Fig.DM12-1and Fig.DM12-2.
3. Install the S Boat Ass'y to the Link Arm and align the Guide (c) of S Boat Ass'y to the Guide (c') of S Rail with your fingers as shown in Fig.DM12 and Fig.DM12-1.
4. Install the Link Arm to the projection (c) on the S Ring with Cut Washer (C-5), as shown in Fig.DM12.

PARTS	⑮ S Rail Unit ⑯ T Rail

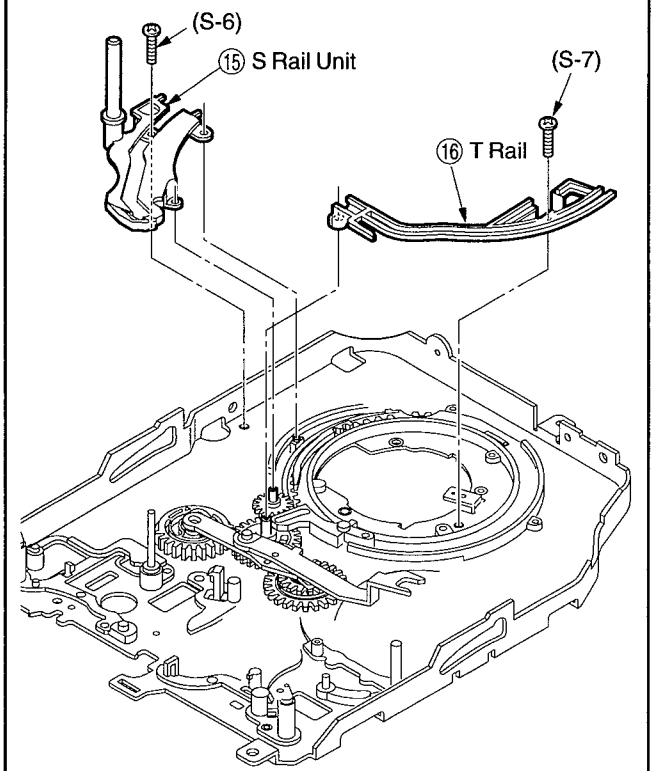


Fig. DM13

PARTS	⑰ Loading Motor Ass'y

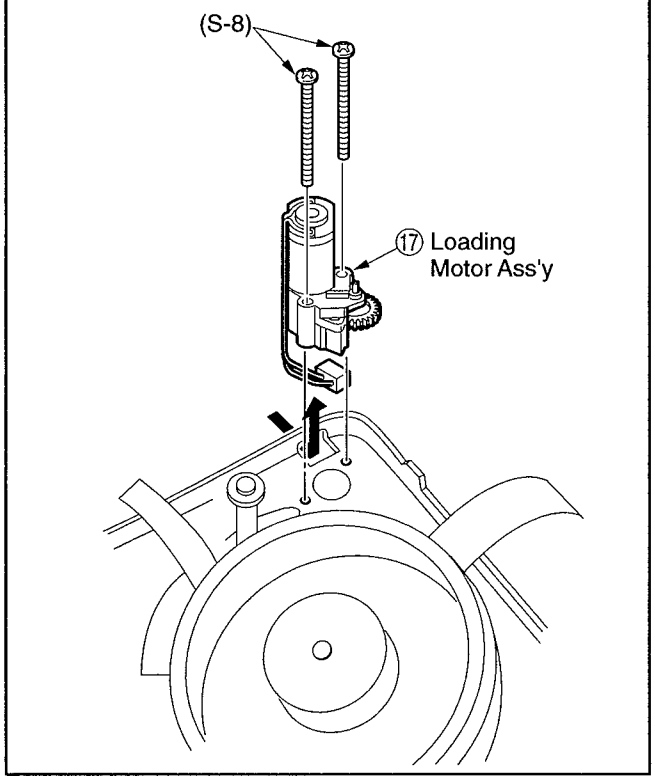
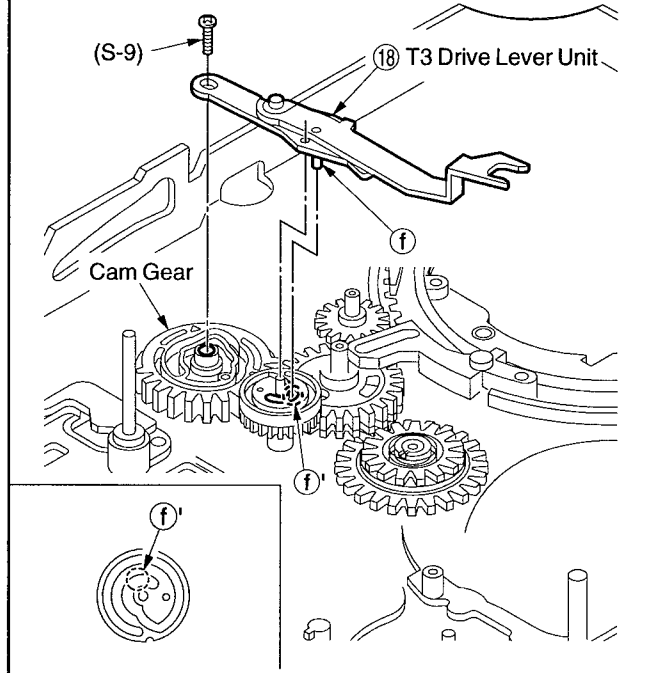


Fig. DM14

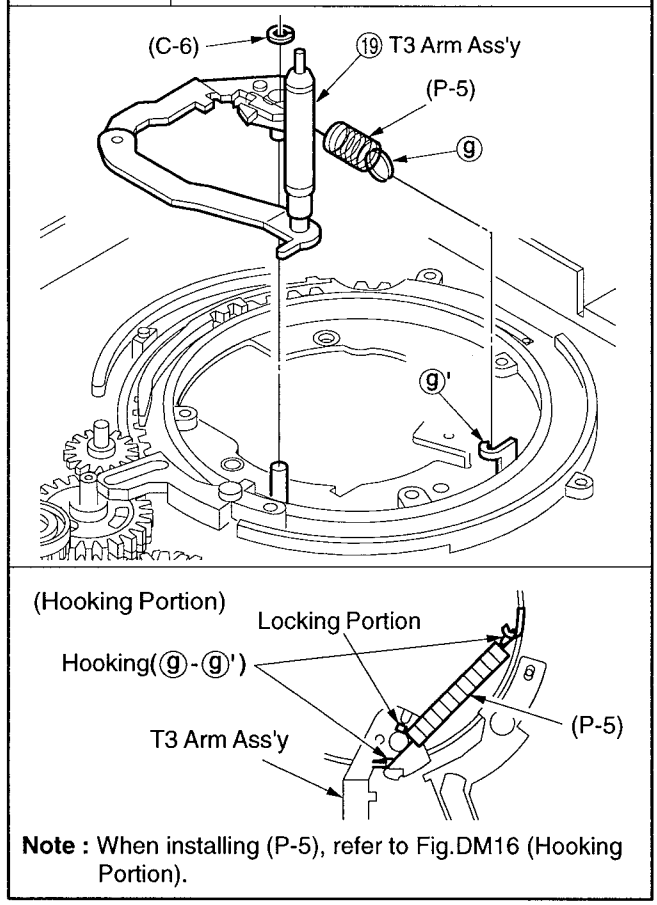
PARTS	⑱ T3 Drive Lever Unit



Note : Install T3 Drive Lever Unit so that ⓕ portion meets ⓕ' portion on Cam Gear.

Fig. DM15

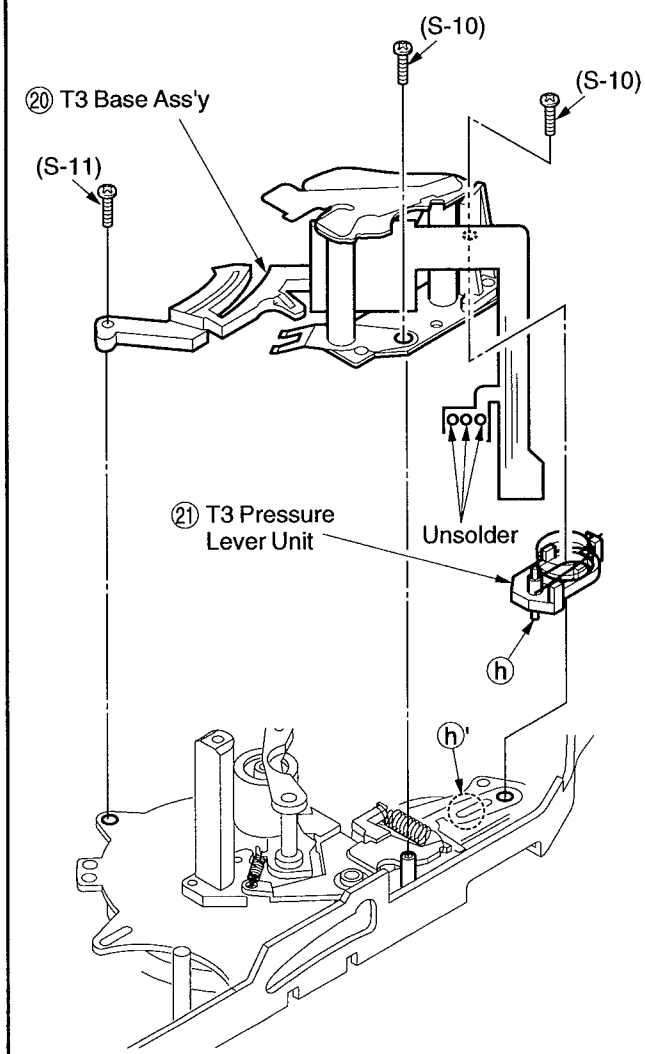
PARTS	⑲ T3 Arm Ass'y

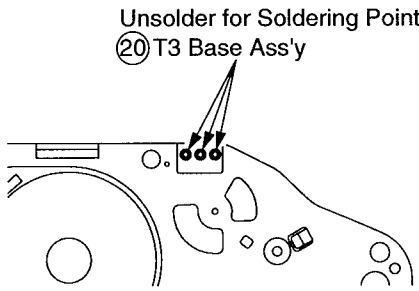


Note : When installing (P-5), refer to Fig.DM16 (Hooking Portion).

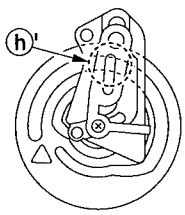
Fig. DM16

PARTS	⑳ T3 Base Ass'y ㉑ T3 Pressure Lever Unit





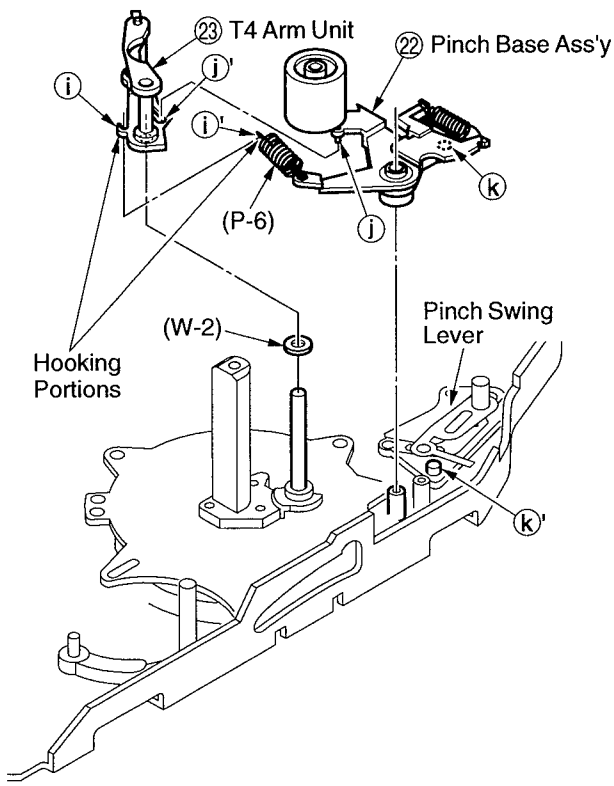
(BOTTOM SIDE VIEW)



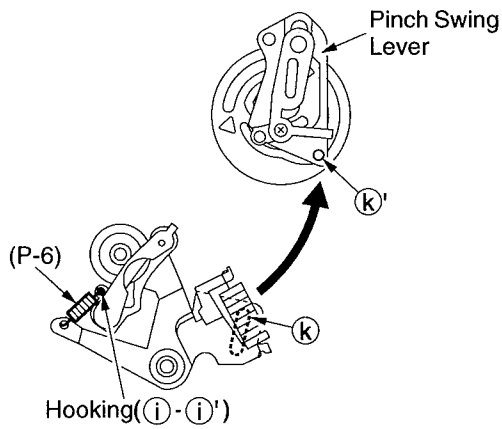
Note : When removing T3 Base Ass'y, unsolder for Mode Switch as shown in Fig.DM 2 (Bottom View).

Fig. DM17

PARTS	㉒ Pinch Base Ass'y ㉓ T4 Arm Unit



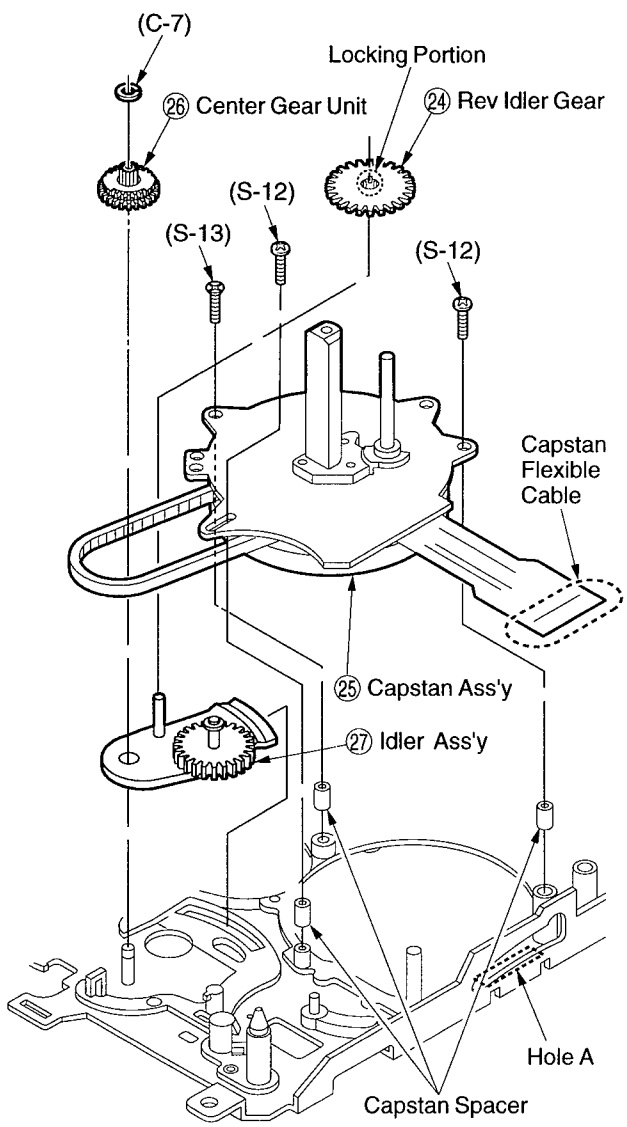
(Hooking Portion)

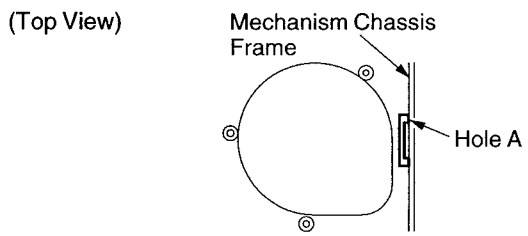


Note : 1. When installing (P-6), refer to DM.18 (Hooking Portion).
2. Install T4 Arm Unit and Pinch Base Ass'y so that ⓙ portion meets ⓙ' portion.
3. Install Pinch Base Ass'y so that ⓚ portion meets ⓚ' portion on the Pinch Swing Lever.

Fig. DM18

PARTS	㉔ Rev Idler Gear ㉕ Capstan Ass'y ㉖ Center Gear Unit ㉗ Idler Ass'y

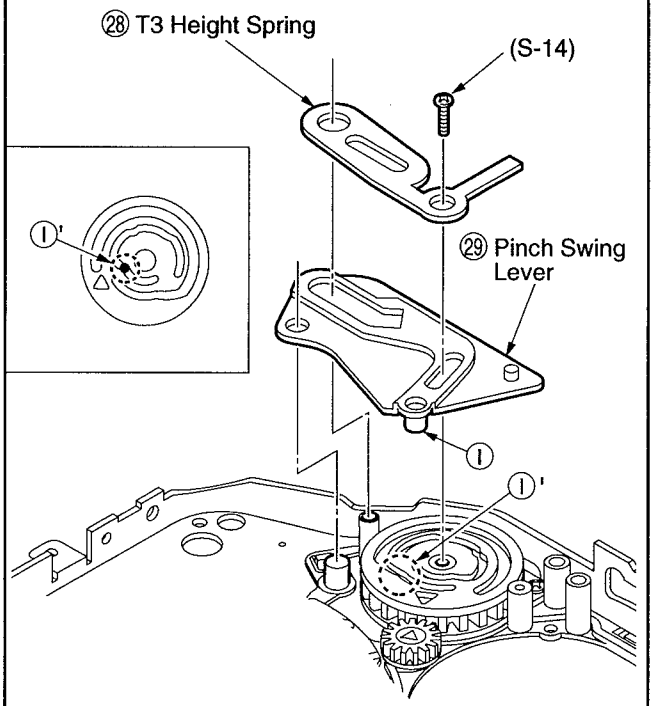




Note : 1. Removed Rev Idler Gear is not reusable. If remoed, installa new one.
2. When installing the Capstan Ass'y, insert the Capstan Flexible Cable to the hole A on the Mechanism Chassis Frame.

Fig. DM19

PARTS	㉘ T3 Height Spring ㉙ Pinch Swing Lever



Note : Install Pinch Swing Lever so that Ⓘ portion meets Ⓘ' portion on Mode Switch.

Fig. DM20

PARTS	㉚ Mode Switch

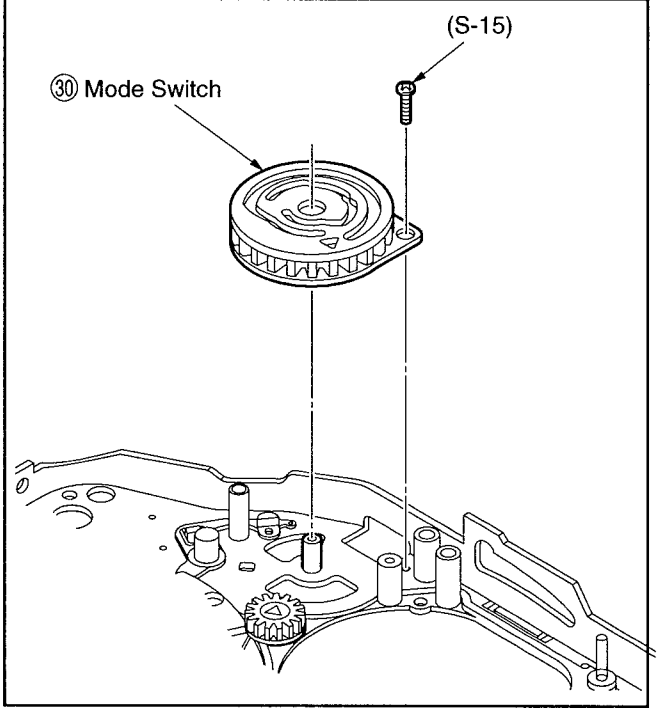


Fig. DM21

PARTS	㉛ Motor Reduction Gear

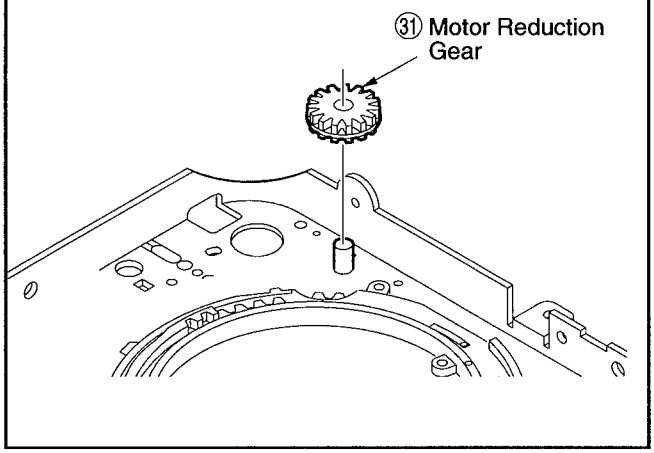


Fig. DM22

PARTS	㉜ Ring Ass'y

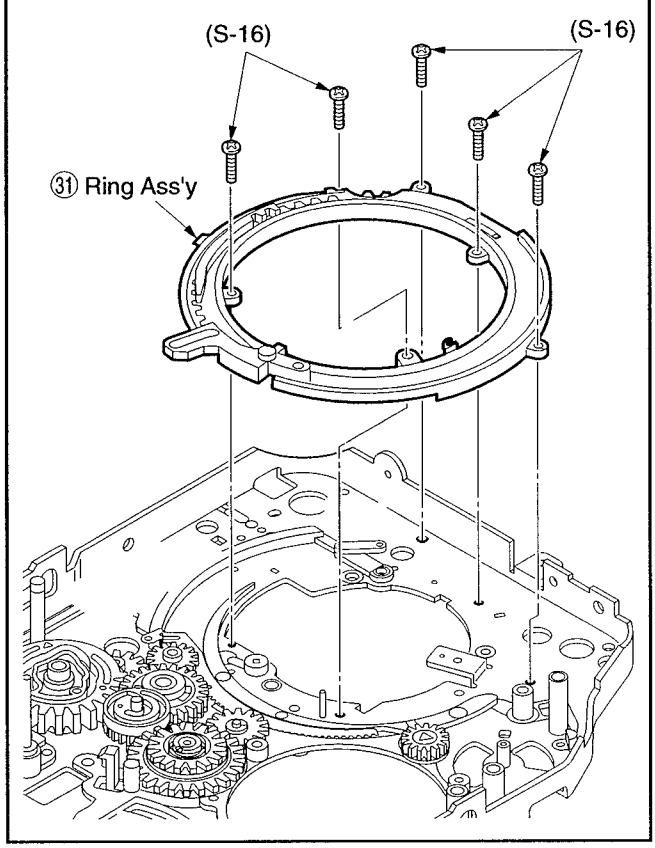


Fig. DM23

ASSEMBLY OF RING GEAR UNIT

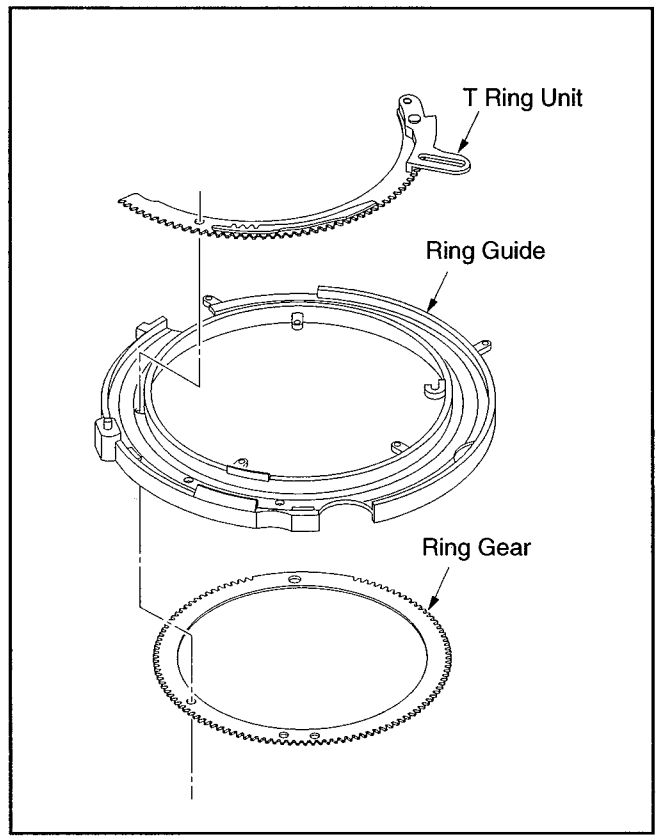


Fig. DM23-1

PARTS	㉝ Switch Intermediate Gear

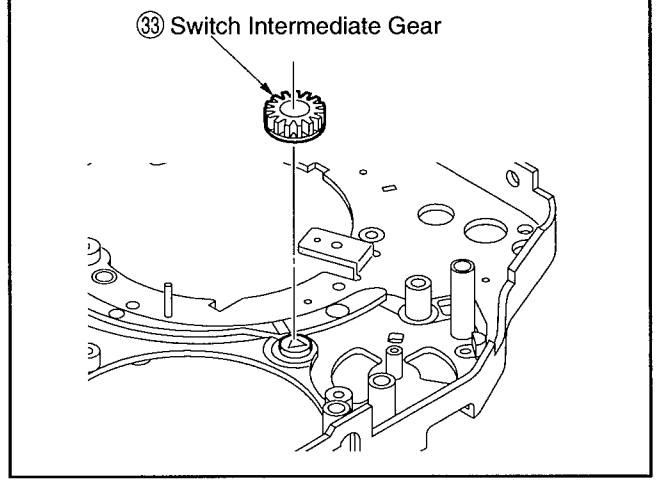


Fig. DM24

PARTS	㉞ T3 Cam Gear ㉟ T Intermediate Gear ㊱ T Loading Gear Ass'y ㊲ Intermediate Gear A

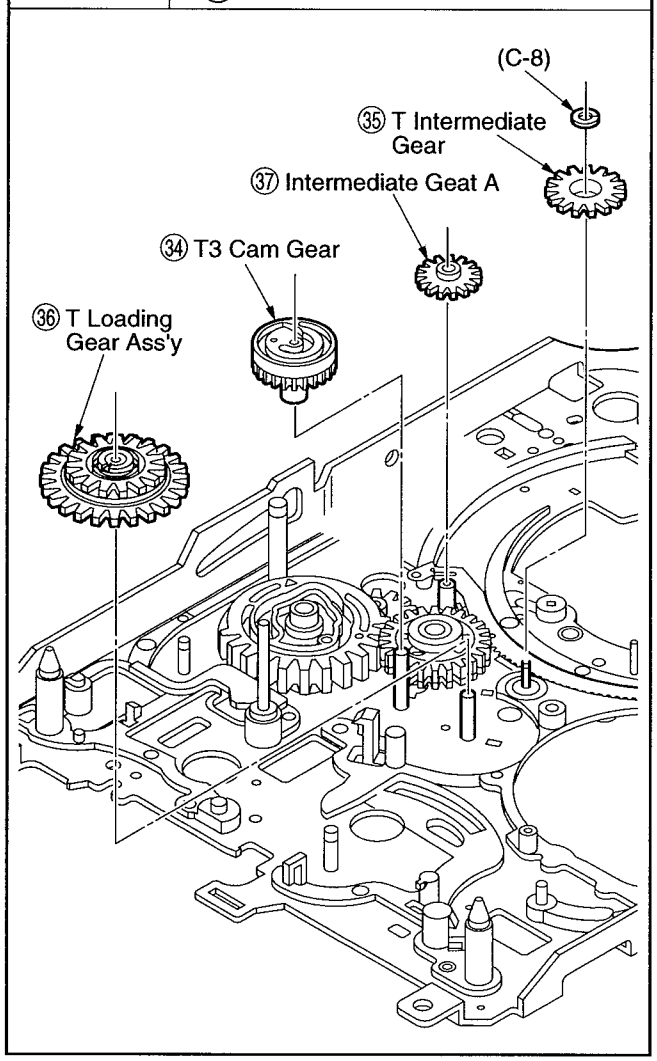


Fig. DM25

PARTS	㊳ Cam Gear ㊴ S Loading Gear Ass'y ㊵ Intermediate Gear B

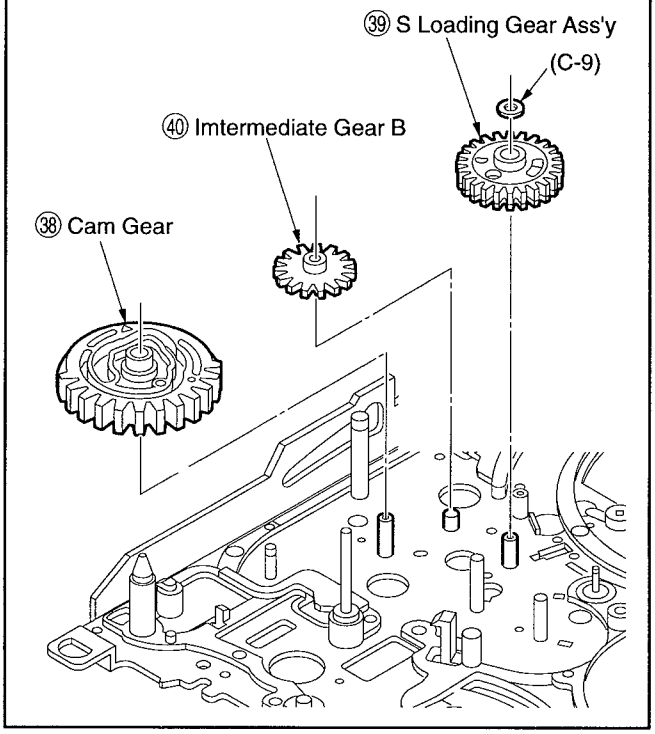


Fig. DM26

PARTS	㊶ S Ring

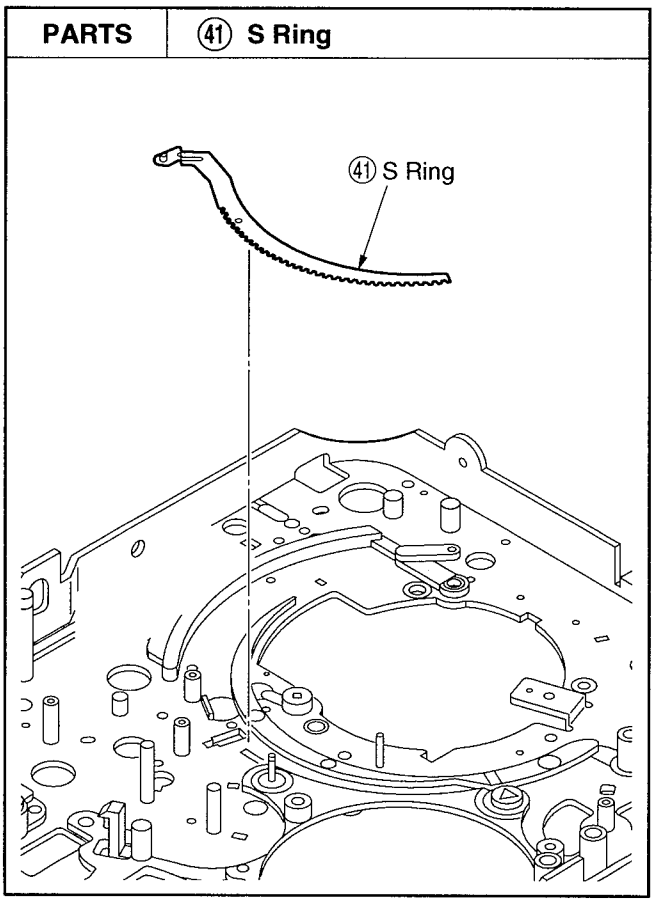


Fig. DM27

PARTS	㊷ Damper Rack

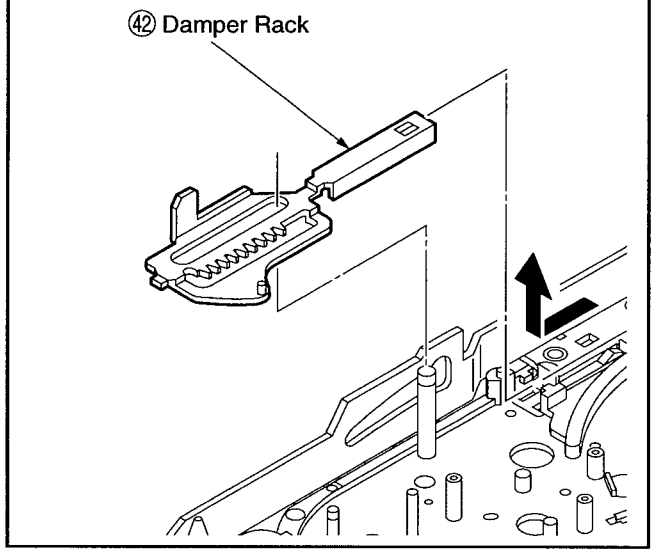


Fig. DM28

PARTS	㊸ S Boat Stopper Ass'y ㊹ T Boat Stopper Ass'y ㊺ Bulge Chip ㊻ Cylinder Connector

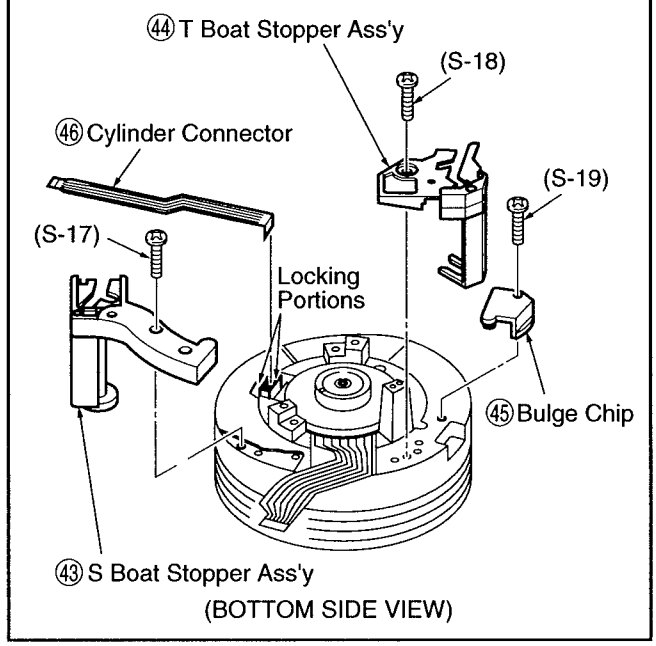


Fig. DM29

4-1. CONFIRMATION OF CLEARANCE BETWEEN PRESSURE ROLLER AND CAPSTAN SHAFT

1. Apply DC+3V to the Loading Motor and load the Mechanism without tape so that the T Boat Ass'y reaches area A.
2. Then confirm clearance B between Pressure Roller and Capstan shaft.it should be 0.3~0.7mm.

Caution:
Do not use any magnetized. Thickness(Feeler)Gauges around the Capstan Shaft.

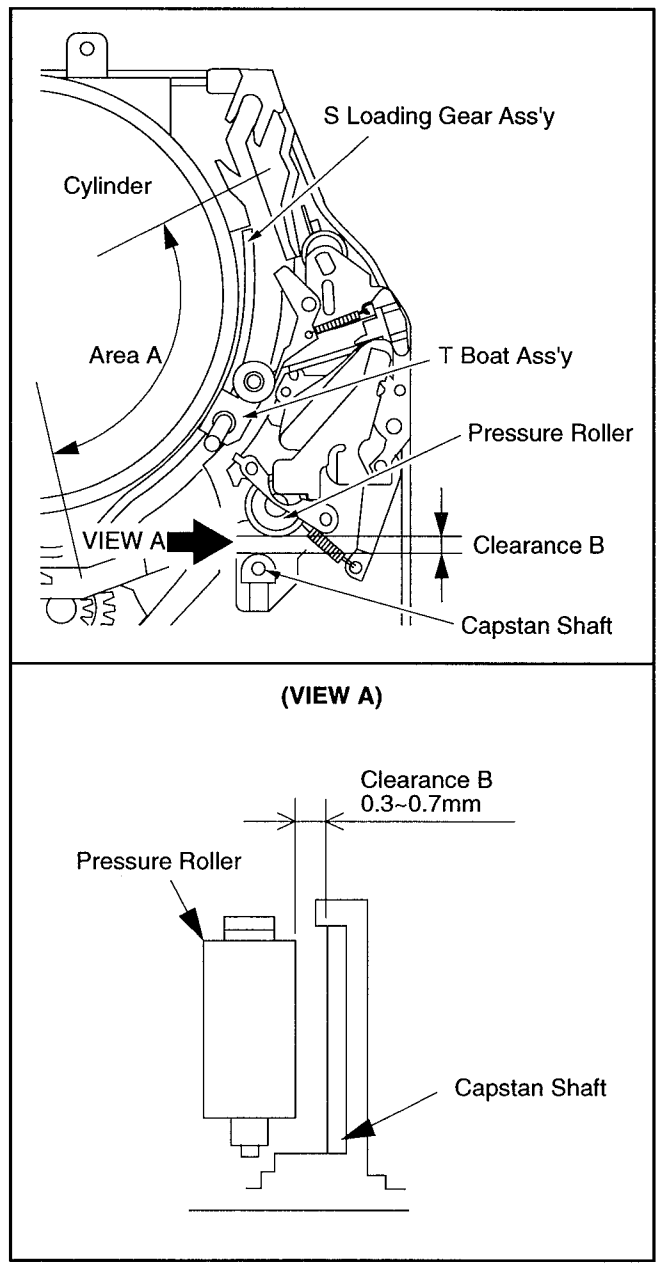


Fig. DM30

5. GEAR ALIGNMENT

The mechanism of this model is mostly engaged to the System Control Circuit through the Mode Switch. Therefore the relation between Mode Switch and the Cam Gear decides all further mechanical movement of the mechanical parts such as levers, gears, rollers and so on. For specific removal and installation procedures, refer to the Disassembly/Assembly Procedures.
If these parts are not properly aligned and only off by one tooth, the unit will be unloaded or stopped. It may result in damage to the mechanical or electrical parts. This mechanical adjustment is performed in the full unloaded stop mode.

Install the Damper Rack (1) .
Install the Damper Rack (1) so that Square Hole A on the Damper Rack is align to the Portion A' on the White Frame as shown in Fig. A1.

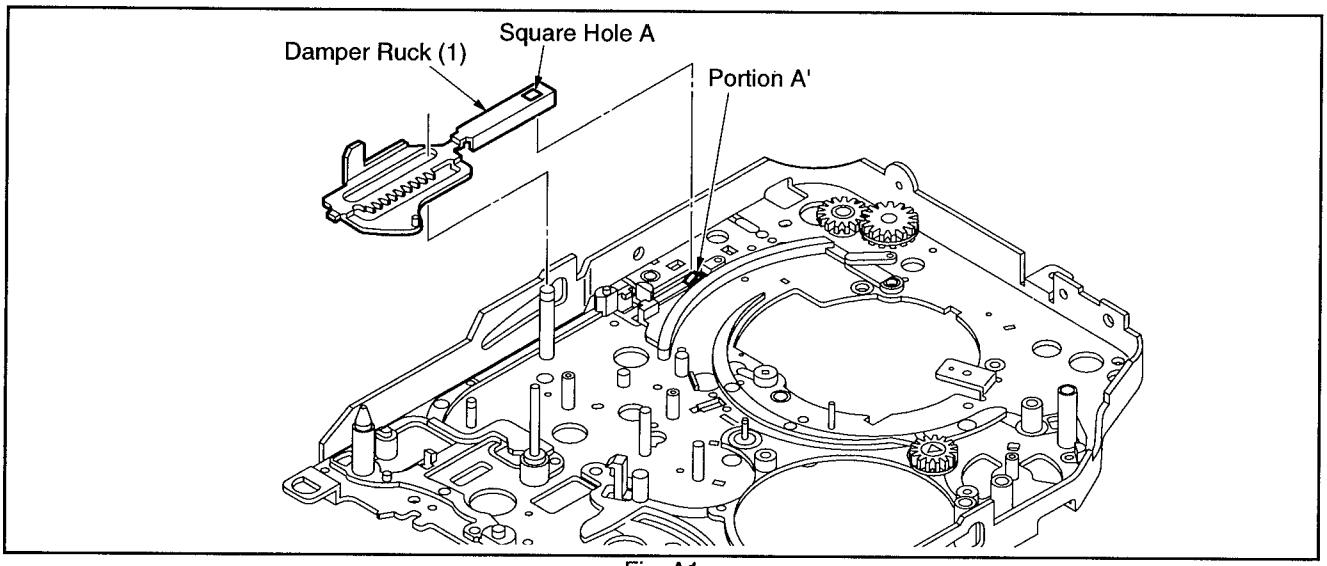


Fig. A1

Install the Intermediate Gear B (2) .

5-1. CAM GEAR / S LOADING GEAR ASS'Y ALIGNMENT

1) Hold the Cam Gear (3) and the S Loading Gear Ass'y (4) and align the Hole A on the Cam Gear and the Hole B on the S Loading Gear Ass'y as shown in Fig. A2..
2) Install the Cam Gear (3) and S Loading Gear Ass'y (4) so that the Hole C on the Cam Gear (3) to the Hole C' on the Mechanism Chassis Frame and Hole D on the S Loading Gear Ass'y (4) to the Hole D' on the Mechanism Chassis Frame as shown in Fig. A8.
3) Before installing the Cam Gear (3) and S Loading Gear Ass'y (4), confirm the Square Hole A on the Damper Rack and Portion A' on the White Frame is aligned .

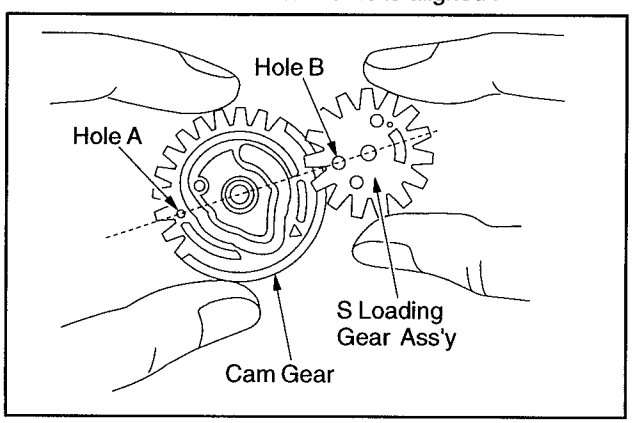


Fig. A2

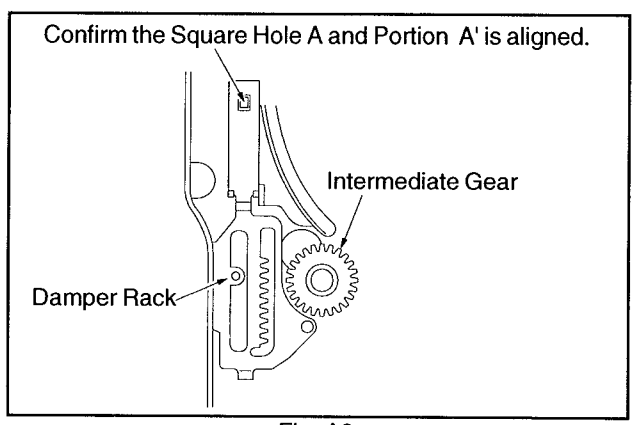


Fig. A3

5-2. S RING ALIGNMENT

Install the S Ring (5) so that Hole E on the S Ring (5) is align to the Hole E' on the Mechanism Chassis Frame as shown in Fig. A8.

↓

Install the Intermediate Gear A (6)

↓

5-3. T LOADING GEAR ASS'Y ALIGNMENT

Install the T Loading Gear Ass'y (7) so that Hole F on the T Loading Gear Ass'y (7) is align to the Hole F' on the Mechanism Chassis Frame as shown in Fig. A8.

↓

5-4. T3 CAM GEAR ALIGNMENT

Install the T3 Cam Gear (8) so that Notch G on the T3 Cam Gear (8) is align to the Hole G' on the Mechanism Chassis Frame as shown in Fig. A8.

↓

5-5. T INTERMEDIATE GEAR ALIGNMENT

Install the T Intermediate Gear (9) so that one of five Hole H on the T Intermediate Gear is align to the Hole H' on the Mechanism Chassis Frame as shown in Fig. A8.

↓

Install the Switch Intermediate Gear (10)

↓

5-6. MODE SWITCH ALIGNMENT

Install the Mode Switch (11) so that Mark I on the Mode Switch (11) is align to the Mark I' on the White Frame as shown in Fig. A8.

↓

5-7. RING GEAR ASS'Y ALIGNMENT

1) Before installing the Ring Ass'y (12), fix the through Hole C-C' with Paper Clip.

2) Align the Hole J on the T Ring Unit (12-1) to the Hole J' on the Ring Guide (12-2) and Hole J" on the Ring Gear (12-3) as shown in Fig. A4.
Then fix the through Hole J-J'-J" with Paper Clip.

3) Install the Ring Ass'y (12) so that through Hole J-J'-J" is align to the Hole K on the Mechanism Chassis Frame as shown in Fig. A5.

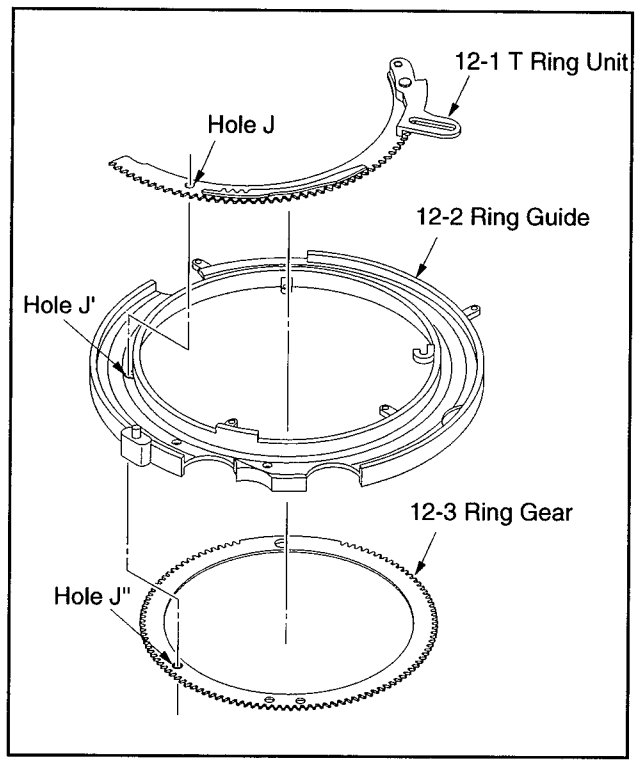


Fig. A4

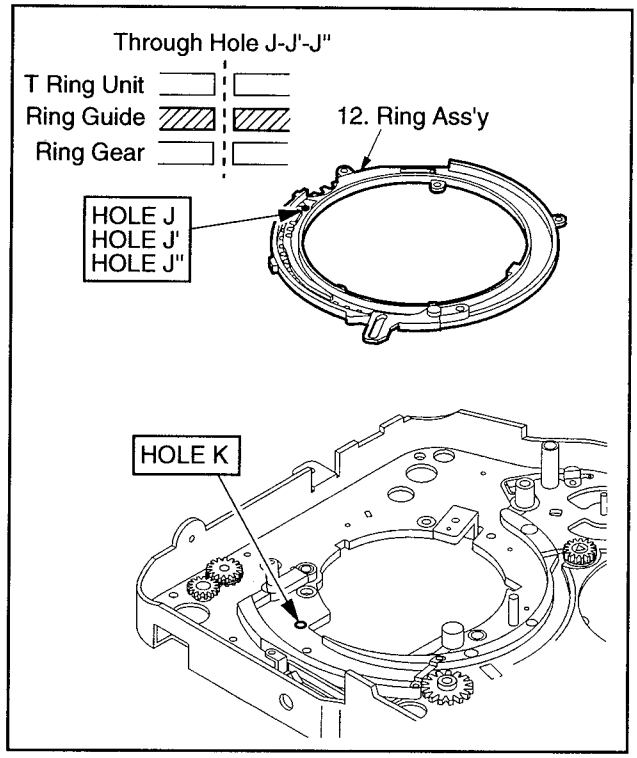


Fig. A5

↓

Install the Motor Slowdown Gear (13)

↓

Install the Motor Couple Gear (14)

6. GEAR ALIGNMENT CONFIRMATION WITHOUT DISASSEMBLY

6-1 CAM GEAR AND S LOADING GEAR ASS'Y ALIGNMENT

1) Through Hole C on the Cam Gear should be aligned to through Hole C' on the Mechanism Chassis Frame as shown in Fig. A8.
2) Through Hole D on the S Loading Gear Ass'y should be aligned to through Hole D' on the Mechanism Chassis Frame as shown in Fig. A8.

6-2. S RING ALIGNMENT

Through Hole a on the S Loading Gear Ass'y should be aligned with Mark a on the S Ring as shown in Fig. A6.

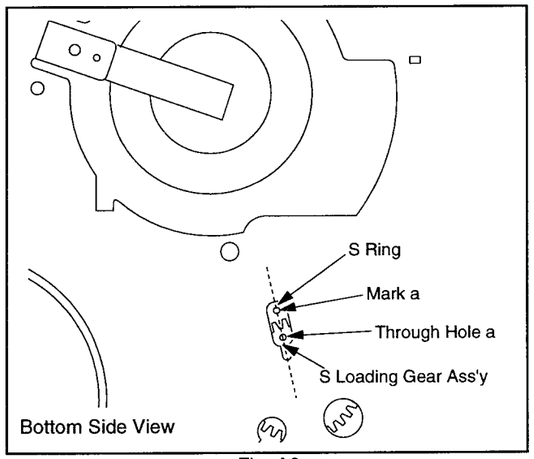


Fig. A6

6-3. T LOADING GEAR ASS'Y ALIGNMENT

Through Hole F on the T Loading Gear Ass'y should be aligned to through Hole F' on the Mechanism Chassis Frame as shown in Fig. A8.

6-4. T3 CAM GEAR ALIGNMENT

Notch G on the T3 Cam Gear should be aligned to Hole G' on the Mechanism Chassis Frame as shown in Fig. A8.

6-5. T INTERMEDIATE GEAR ALIGNMENT

One of five Holes H on the T Intermediate Gear should be aligned to Hole H' on the Mechanism Chassis Frame as shown in Fig. A8.

6-6. MODE SWITCH ALIGNMENT

Mark I on the Mode Switch should be aligned to Mark I' on the White Frame as shown in Fig. A8.

6-7. RING GEAR ASS'Y ALIGNMENT

Hole K on the Mechanism Chassis Frame should be aligned to through Hole J"-J'-J as shown in Fig. A7.

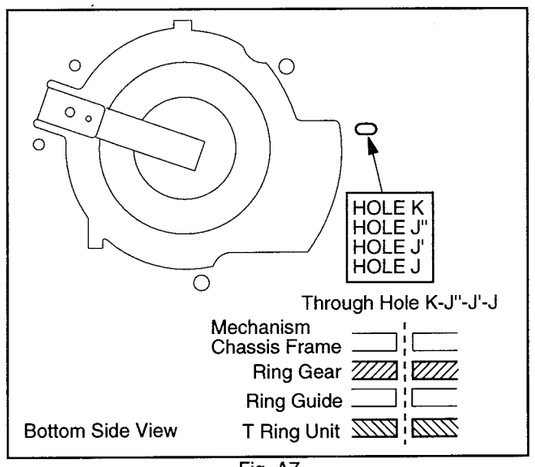


Fig. A7

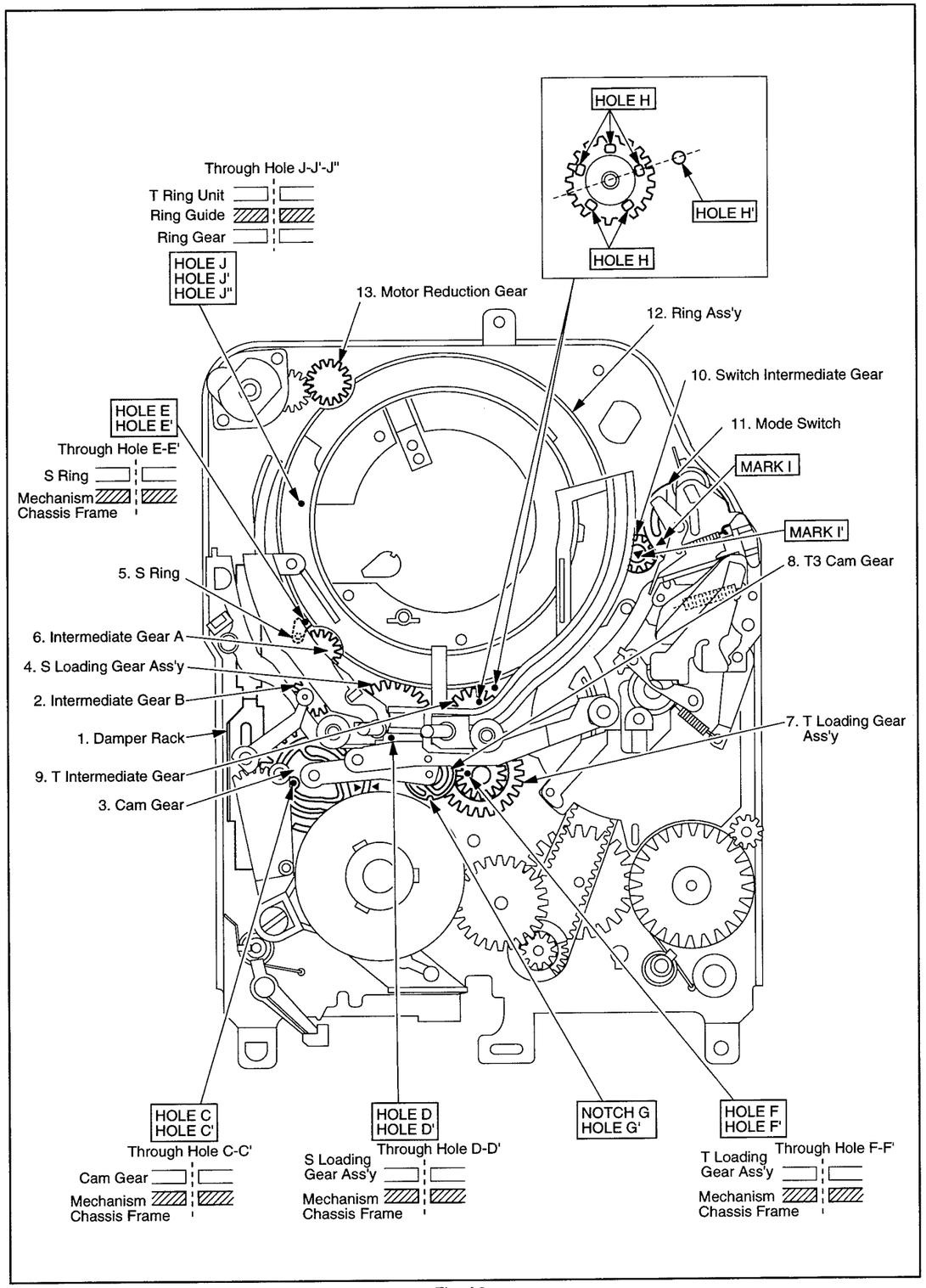


Fig. A8

SCREWS AND WASHERS FOR DISASSEMBLY / ASSEMBLY

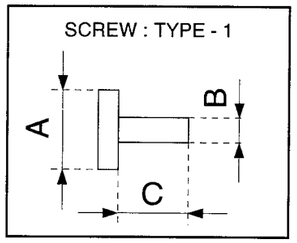


Fig.1

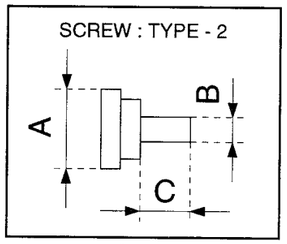


Fig.2

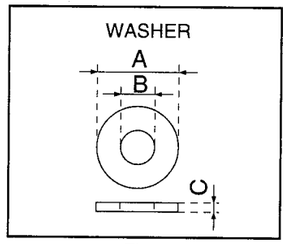


Fig.3

Note:
Fig.1, Fig.2, Fig.3, show dimension of screws and washers.

SCREWS FOR CABINET

※ Screw No.	Configuration	Color	Dimension(mm) A×B×C	※ Item No.
(S-1),(S-7)		BLACK	3.4×2×6	636
(S-2),(S-5),(S-9),(S-10), (S-16),(S-17)		BLACK	3.5×2×5	586
(S-3)		BLACK	3.5×2×10	617
(S-4),(S-8)		BLACK	3.5×2×8	604
(S-6)		BLACK	3.3×2×4	469
(S-11)		GOLD	3.5×2×3	540
(S-12),(S-14)		BLACK	5×2×5	473
(S-13)		GOLD	2.4×1.4×8	634
(S-15)		GOLD	3.5×2×3	461
(S-18)		BLACK	5×2×3	472
(S-19)		GOLD	2.5×1.4×3	632

SCREWS FOR MECHANISM CHASSIS

※ Screw No.	Configuration	Color	Dimension(mm) A×B×C	※ Item No.
(S-1),(S-2),(S-7),(S-11), (S-14),(S-15),(S-16)		GOLD	2.5×1.4×3	632
(S-3)		SILVER	2.7×1.6×3	606
(S-4)		GOLD	2.7×1.6×5	635
(S-5),(S-6)		GOLD	3.5×1.4×3	528
(S-8)		GOLD	3×1.4×11	544
(S-9)		GOLD	2.5×1.4×2	598
(S-10),(S-19)		SILVER	2.7×1.6×3	628
(S-12)		SILVER	2.4×1.4×6	633
(S-13)		GOLD	2×1.4×6	541
(S-17),(S-18)		GOLD	3.5×1.6×5	597

WASHERS FOR MECHANISM CHASSIS

※ Screw No.	Configuration	Color	Dimension(mm) A×B×C	※ Item No.
(C-1),(C-2),(C-3),(C-4), (C-5),(C-6),(C-7),(C-8)		BLACK	3×1.5×0.25	419
(w-1)		BLACK	3.2×1.5×0.4	489
(w-2)		BLACK	5×2.6×0.5	639

※ Screw No. : These numbers are the same as that in Disassembly / Assembly Procedures.
※ Item No. : These numbers are the same as that in the Exproded Views.

B.ELECTRICAL ADJUSTMENT PROCEDURES

PREPARATION

(1) Mount the camcorder on the tripod.

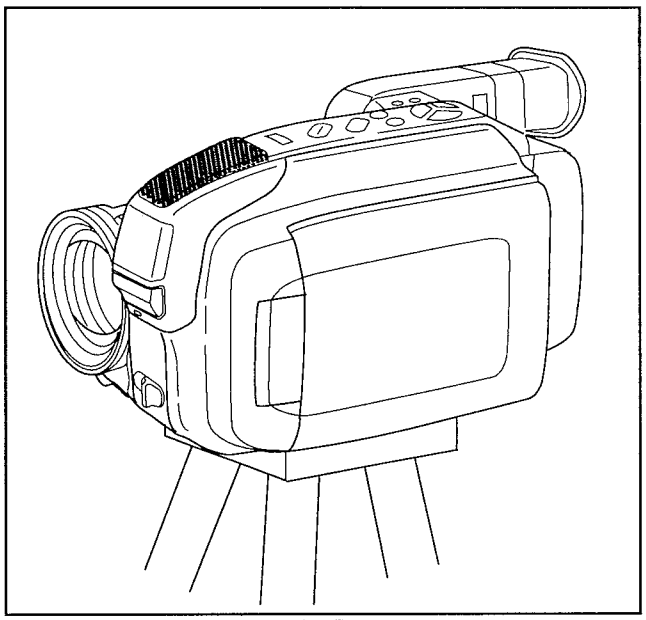


Fig. B1

(2) Connect the AC adaptor and camcorder.
(3) Open EVR cover at rear side of the unit. (Refer to Item L. How To Use TP Board Kit in the Service Caution Section.)

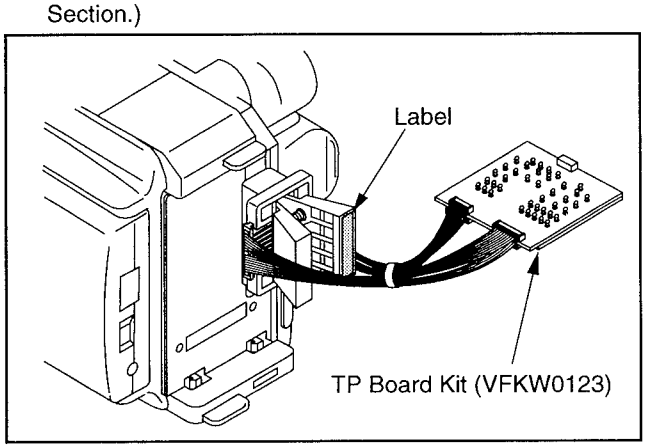


Fig. B2

(4) TP Board Kit (VFKW0123) setting Method
   1. Be sure to insert the cable with the white wire positioned as shown in Fig. B3. (on the side with the label.)
   2. When inserting connector (VFKW0123C) into the test point terminal (S101) at the back of the camcorder unit pinch the grips and be sure that the label is to the lens side (right).
   3. When removing connector VFKW0123C, be sure to pinch the grips.

(5) Connect the TP Board Kit (VFKW0123) to S101.

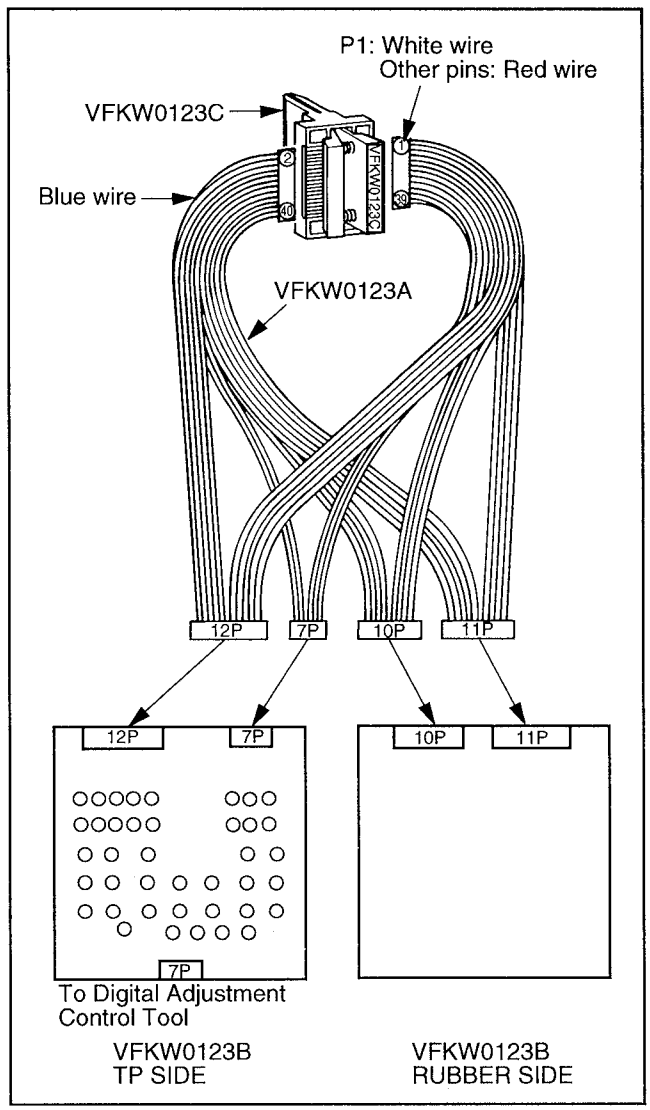


Fig. B3

Note :

1. Service work for the camera unit must be performed in a dust-free location to maintain lens cleanliness.
2. To achieve the best adjustment results, warm up the camera for approximately 30 minutes before adjusting.
3. Use the oscilloscope to trigger on the signal.

IMPORTANT CAUTION :

DO NOT CONNECT OR DISCONNECT ANY TP BOARD KIT WHILE THE UNIT IS POWER UP.

CAUTION:

1. Before using the VFKW0123 be sure to clean the P.C.B. pattern with alcohol and confirm that there is no dust in the TP clip.
2. When removing connector VFKW0123C, be sure to pinch the grips.

ELECTRICAL ADJUSTMENT FOR CAMERA SECTION

TEST EQUIPMENT AND TOOLS

The following equipment is required for adjustment of the camera section of VHS-C camcorder.

1. Oscilloscope
   Dual Trace, 25MHz, 2mV/DIV,
   10 : 1 Probe
   1 : 1 Probe
2. Digital Volt Meter
3. Frequency Counter
4. Vectorscope
5. Light Meter
6. Tripod
7. Color Video Monitor
8. Tungsten Lamp(20W/120V)
9. Lighting
   150 footcandles(2000 lux), 3050 degrees K and 5100 degrees K.
10. Reflection Chart
    Reflection Chart Set (Part No. : VFKS003-N)
    (Reflection Chart Set consists of Gray Scale Chart VFKS003A, Color Bar Chart VFKS003B, Registration Chart VFKS003C, and Resolution Chart VFKS003D.)
    Gray Scale Chart (Part No. : VFKS003A)
    Color Bar Chart (Part No. : VFKS003B)
    Registration Chart (Part No. : VFKS003C)
11. Light Box W/Chart Set (Part No. : VFKS002)
    Gray Scale Chart (Part No. : VFKS002A)
    Color Bar Chart (Part No. : VFKS002B)
    Registration Chart (Part No. : VFKS002C)
    Resolution Chart (Part No. : VFKS002D)
    Light Box (Part No. : VFKS002Y)
12. Color Chip Chart Part No. : VFKW0116
13. Plastic Tip Driver
14. Color Temperature Conversion Filter
    (3050°K-around 5100°K)
    [The value of filter is around(-120 to -130)mireds-Blue Filter 80A or Equivalent.]
15. Color compensating Filter CC05M
16. Digital Adjustment Control Tool (Part No.: VFKW0083)

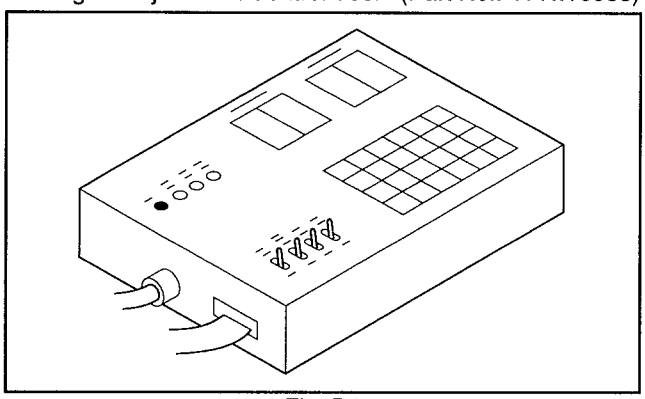


Fig. B4

17. Audio Video Cable (Part No. : VJAW0032)

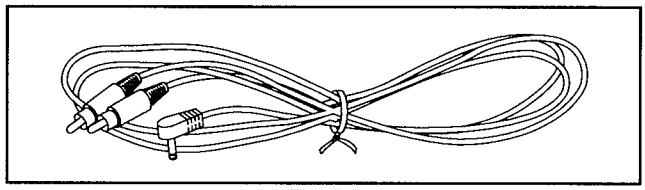
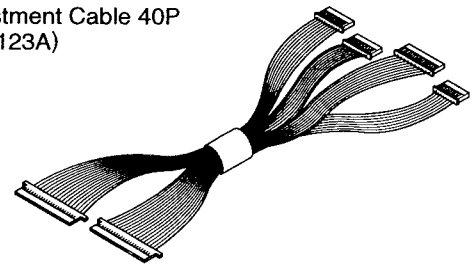


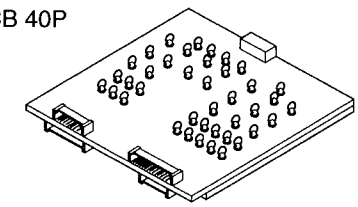
Fig. B5

18. TP Board Kit (Part No. : VFKW0123)

TP Adjustment Cable 40P
(VFKW0123A)



TP Adjustment PCB 40P
(VFKW0123B)



TP Clip 40P
(VFKW0123C)

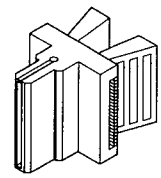


Fig. B6

19. Side L Connector Unit (Part No. : VEQW0261)

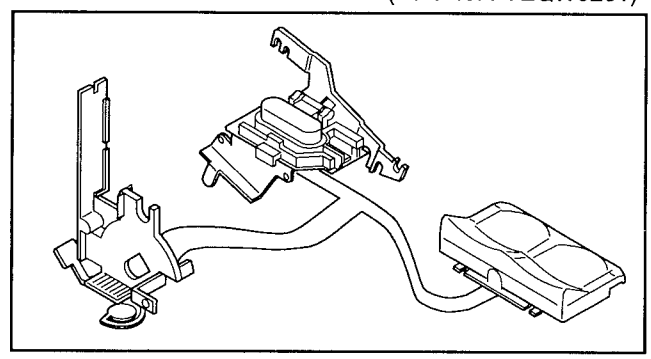


Fig. B7

20. A.W.B. Adjustment Fixture (Part No. : VFKW0066)

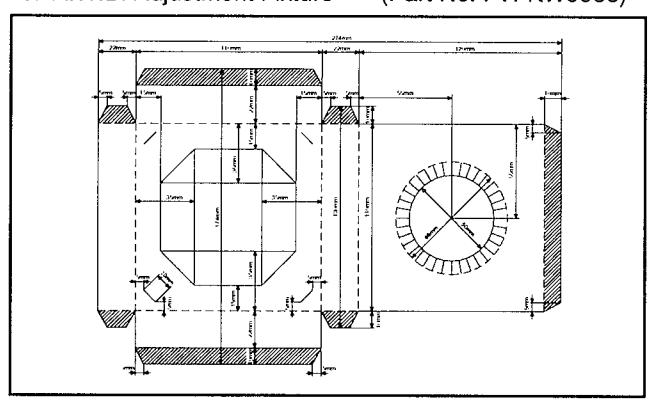


Fig. B8

HOW TO READ THE ADJUSTMENT PROCEDURES

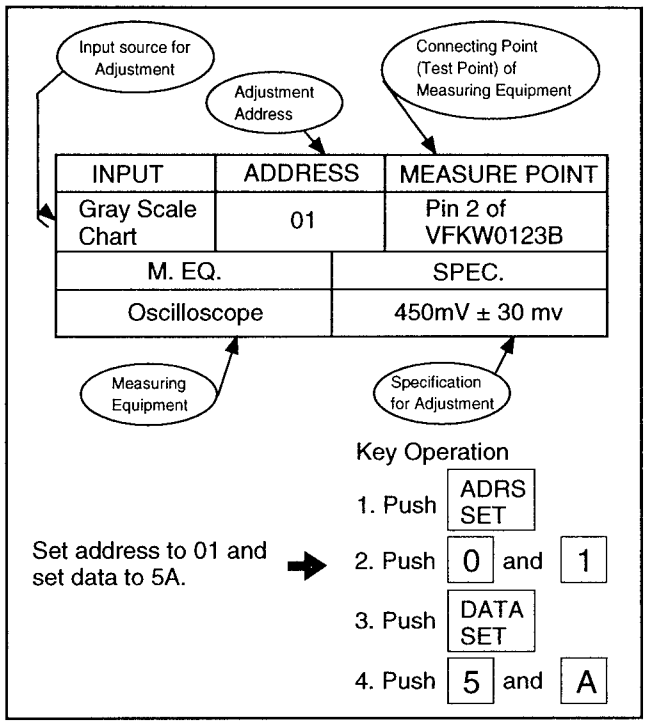


Fig. B9

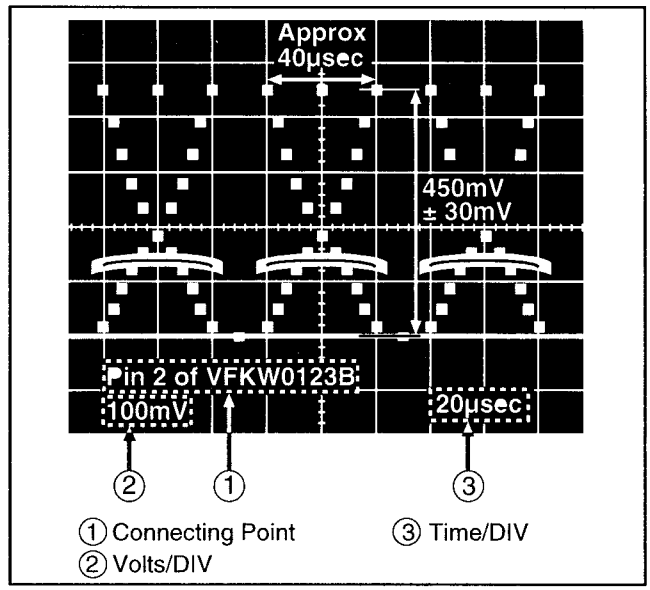


Fig. B10

COMPARISON CHART OF MODELS & MARKS

MODEL No.	MARK
PV-L657	A
PV-L757	B

ADJUSTMENT PORTION

1. EVR

The EVR(Electronic Variable Resistor)tool is a digital electrical adjustment system different from the past mechanical VR adjustment systems. These differences are shown in Fig. B11.
The microprocessor conveys serial data between the digital adjustment control tool (EVR tool). The data in the EEPROM (Electrically Erasable Programmable Read Only Memory) inside the DSP microprocessor is changed by commands from the Digital adjustment control tool. The EEPROM data is sent in serial to the VIDEO / CAMERA IC. Compared with the present system using Variable Resistors (VR's), there is no mechanical factors to the system so there is no secular change, also along the same line, there are no VR's to weaken, causing breakdown, etc. These all help to greatly increase the reliability of products.

2. EEPROM Initial Set

The EEPROM in the microprocessor as a replacement part contains the initial data. (The data shown in TABLE Page III-46,47). EEPROM initial set is preset in the new microprocessor.

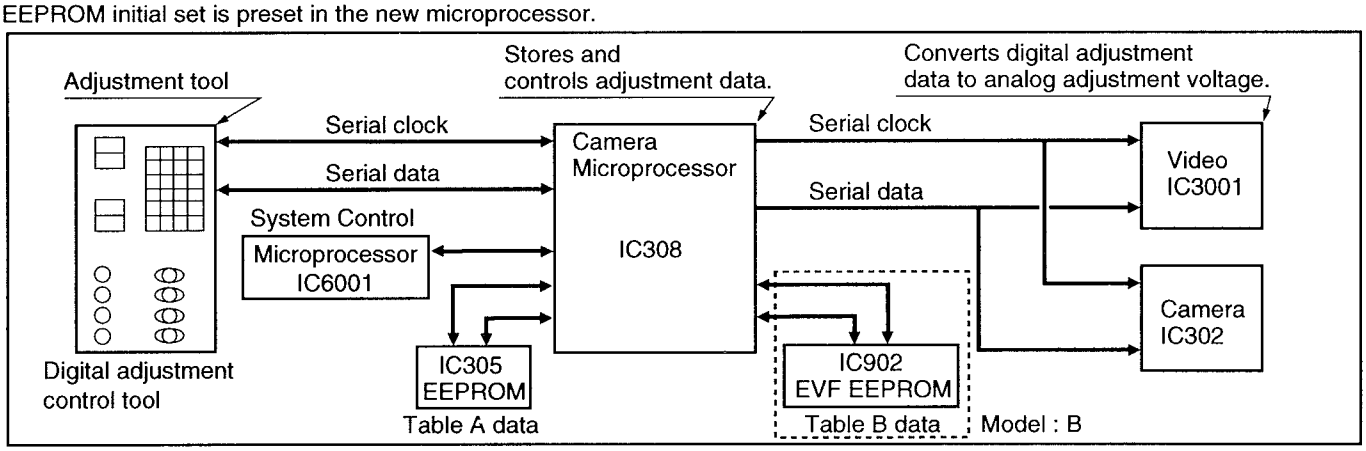


Fig. B11 EVR System Outline Diagram

3. EVR Digital Adjustment

The adjustment is basically the same as the previous analog camera adjustment but, instead of turning a volume, the adjustment is made by pushing keys on the digital adjustment control tool.

4. Digital Adjustment Tool Explanation

The digital adjustment tool is shown in Fig. B12.

(1) MODE switch is used to switch the operating mode. In the WRITE side data can be written to the EEPROM, and in the READ side data is read from the EEPROM or RAM.

(2) AREA switch. It is used to switch the operational area in the memory. In the NOR side the EEPROM or RAM operation address is form 00 to FF. In the EXT side the RAM operation address is from 00 to FF. When adjusting EXT RAM the switch should be in the EXT position which controls address 00 to FF.

(3) MEMORY switch is used to switch the operating memory. In the INTRAM side, the DSP microprocessor internal RAM operates. In the EEPROM side, the microprocessor internal EEPROM operates.

(4) COLOR BAR switch must not be used with this model. Keep it OFF.

(5) HEXADECIMAL (0 to F) keys are used to input address and data values.

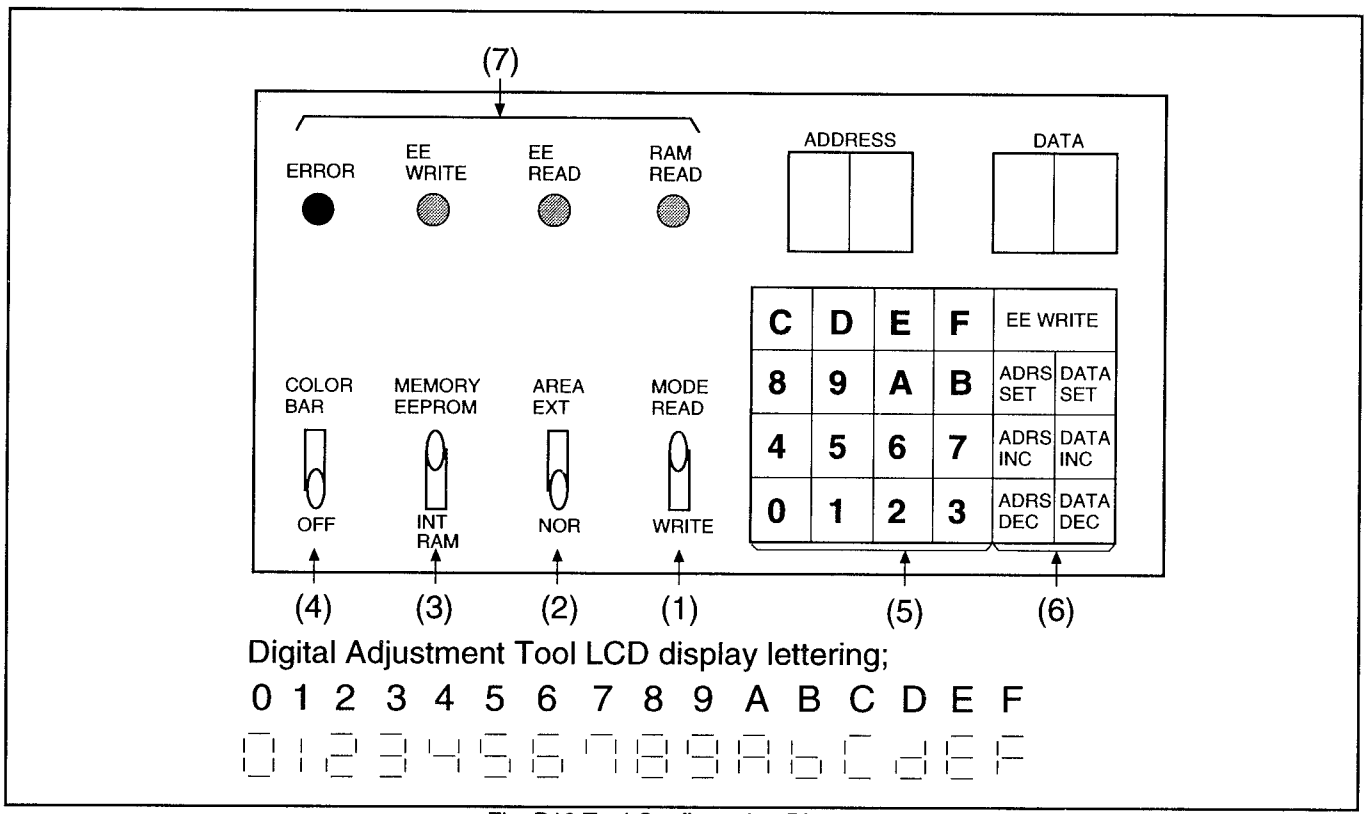


Fig. B12 Tool Configuration Diagram

(6) OPERATION keys:

ADRS SET key is used to set the hexadecimal address. Hexadecimal key input after this key is pushed are treated as addresses.

DATA SET key is used to set the hexadecimal data. Hexadecimal key input after this key is pushed are treated as data. (Refer to the chart on the next page.)

DATA INC key is used to increase the present data by 1.

DATA DEC key is used to decrease the present data by 1.

EE WRITE key is used to write data in serial to the area of the EEPROM set by the AREA switch.

(7) LED Display indicates any alarm and present operating condition.

ERROR flashes when the write to the EEPROM has failed.

EE WRITE flashes in the EEPROM data write mode.

EE READ flashes in the EEPROM data read mode.

RAM READ flashes in the microprocessor internal RAM read mode.

<IMPORTANT CAUTION>

While you are adjusting, Don't push the EE WRITE SWITCH. This will change all data.

5. CAAS (Computer Assisted Adjustment System) Kit

A new PC-EVR adjustment tool kit (CAAS Kit / VFKW1000) has been introduced to improve the electrical adjustment of our camcorder at a reasonable cost. It can be used to perform the same functions as the original EVR Tool / VFKW0083 but much easier and quicker.
The PC-EVR adjustment tool kit (CAAS Kit / VFKW1000) can be ordered which includes items A, B, C as shown below or each item can be ordered individually.

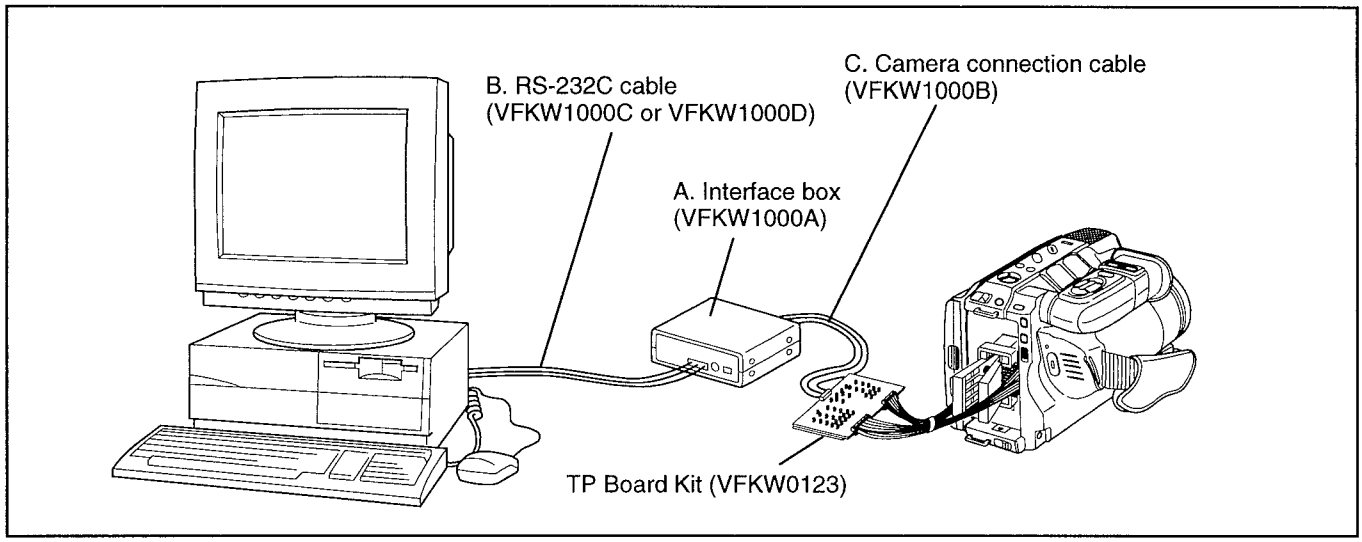


Fig. B13

Hexadecimal / Decimal Conversion Chart

2nd Hexa-decimal No. / 1st Hexa-decimal No.	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
3	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
4	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
5	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
6	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111
7	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
8	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
9	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159
A	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175
B	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191
C	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207
D	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223
E	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239
F	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255

6. Digital Adjustment Tool Connection Method

Fig. B14 shows the connections between the digital adjustment control tool and camcorder.

(1) Connect the digital adjustment control tool and S101 of camcorder via TP Board kit(VFKW0123).
Keep camcorder and digital adjustment control tool power.

(2) Connect each AC adaptor to camcorder and digital adjustment control tool. Then, first turns on the digital adjustment control tool, and second turn on the camcorder power.

(3) Set the MODE switch to READ, the AREA switch to NOR, the MEMORY switch to EEPROM, and the COLOR BAR switch to OFF, as a initial setting.
At this time, the address display shows 00 and Various number data is displayed. If the address display is FF, the connector is not connected properly.

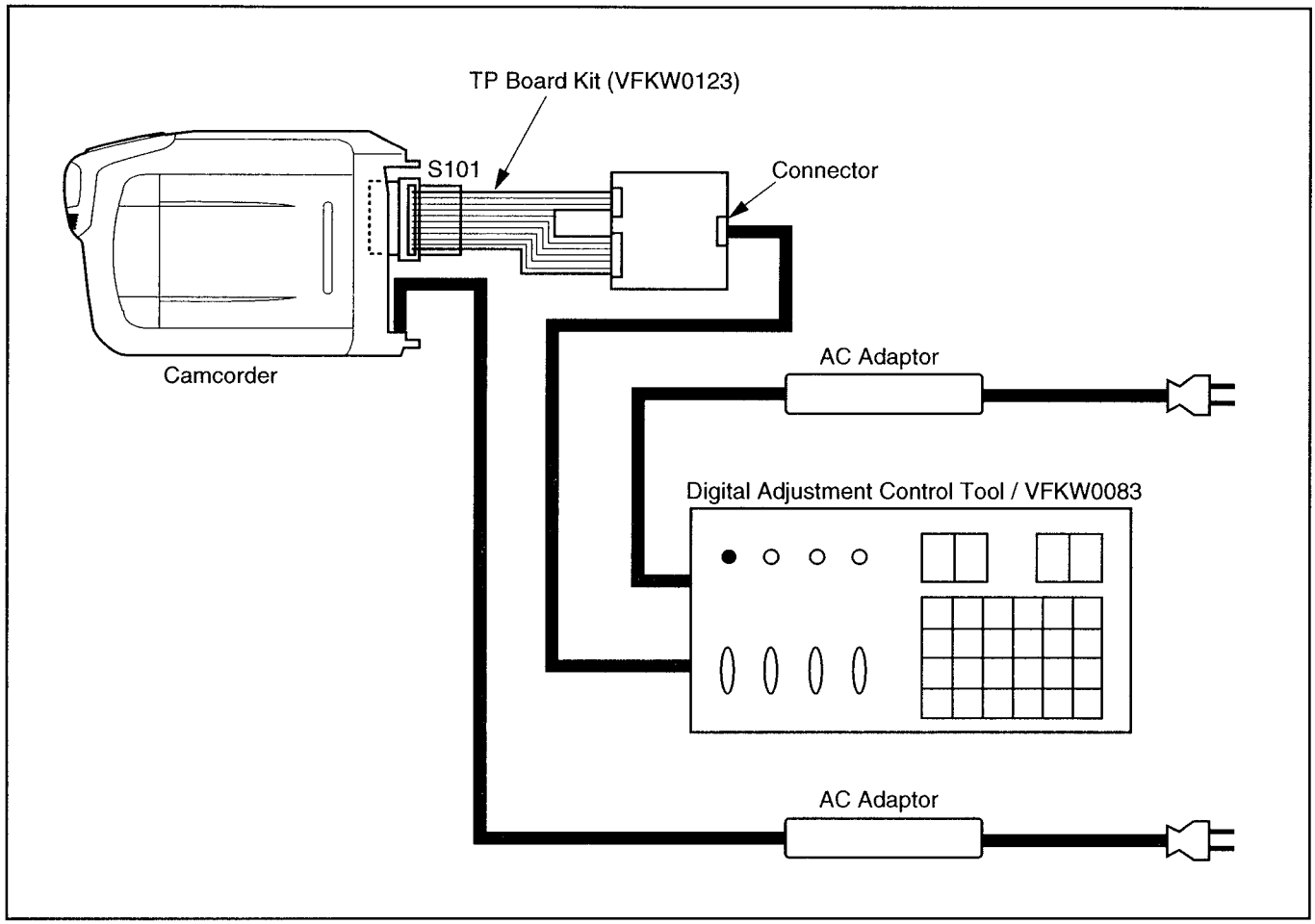


Fig. B14 Tool Connection

7. Adjustment Method With Reference Data

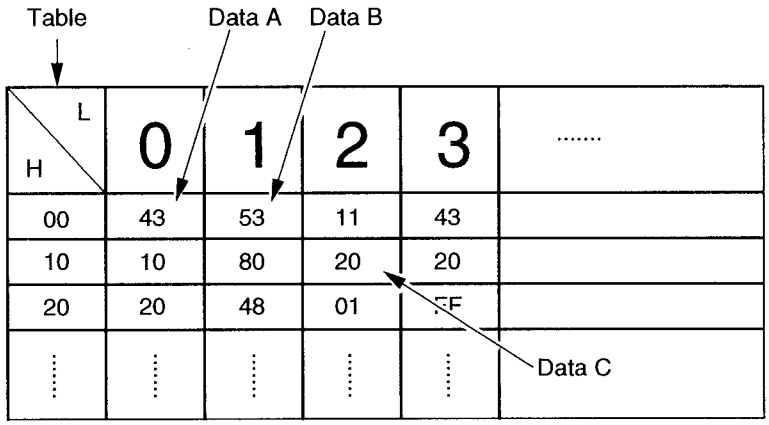
If the EE-WRITE switch on the digital adjustment control tool is accidentally pressed, input the all reference data shown in page III-46 to put the unit into the initial position. Then confirm and adjust all adjustments to get the best picture.

The connection set up is as stated before.

EEPROM reference Table A Input : Refer to Page III-46.

Digital adjustment control tool setting.

COLOR BAR : OFF
MEMORY : EEPROM
AREA : NORMAL
MODE : WRITE



Example of Data A
Set address to 00 and set data to 7A.

Example of Data B
Set address to 01 and set data to 90.

Continue

Example of Data C
Set address to 12 and set data to 48.

Continue the above action to Address FF.

EEPROM reference Table B Input : Refer to Page III-47.

Digital adjustment control tool setting.

COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : WRITE

EEPROM Reference A Table (CAMCORDER)

H \ L	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
00	43	53	11	43	**6A**	**99**	**B3**	**74**	**5F**	**56**	**86**	**7E**	**87**	**5F**	**8E**	**8B**
10	10	80	20	20	F0	75	**6A**	**7C**	**8C**	**7E**	**72**	**80**	70	28	20	40
20	20	48	01	FF	5A	01	06	9B	9C	69	69	00	00	00	00	00
30	01	01	00	80	04	80	FF	04	00	81	80	78	72	6E	4E	79
40	80	83	8F	97	AA	07	07	07	07	00	00	00	00	07	07	08
50	0B	00	00	00	00	46	06	08	04	CA	00	24	00	12	02	00
60	7A	00	3A	60	00	49	00	90	A0	16	FD	20	E8	85	2B	10
70	11	FF	00	20	A0	28	04	D0	08	CE	**02**	**00**	21	F5	FF	E2
80	AE	FE	2F	FF	04	27	53	90	00	18	30	48	70	80	90	A0
90	8C	92	98	9C	00	10	20	30	04	06	03	01	00	FF	10	40
A0	7F	7F	90	08	10	00	00	DA	F0	00	10	40	A8	E6	FF	D0
B0	9B	96	78	00	40	80	A8	E6	30	30	30	01	FD	6D	8C	03
C0	80	78	74	2D	2D	68	9D	C0	D0	38	05	10	15	00	14	00
D0	00	00	00	00	04	E6	80	**4A**	80	3B	10	08	15	40	02	00
E0	14	12	14	C6	16	76	17	E0	00	5A	BC	FF	0C	0E	02	01
F0	03	20	CE	90	0C	49	5A	76	02	2B	02	2B	86	7A	3D	3A

Bold-faced letter →Data changed During Adjustment
others →Set value

COMPARISON CHART OF MODELS & MARKS

MODEL No.	MARK
PV-L657	A
PV-L757	B

EEPROM Reference B Table (CAMCORDER & COLOR EVF)

H \ L		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
00 (C. EVF)	Model : A	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
	Model : B	A0	**90**	00	**50**	30	**A0**	**88**	**B8**	**60**	90	**90**	**B8**	**17**	**80**	**60**	**80**
10		40	00	65	**19**	03	60	20	51	08	00	0A	01	80	08	CE	BE
20		**8A**	**65**	**8D**	B4	**B0**	10	**6D**	01	05	88	40	20	10	02	CE	BE
30		00	00	09	00	12	00	13	A0	14	E1	0F	07	12	0C	19	92
40		00	00	02	6C	09	08	0B	38	0F	FF	11	11	01	01	01	F9
50		01	BD	22	4D	01	66	80	02	C2	01	00	02	04	04	06	E6
60		**94**	**30**	**90**	FF	10	**7C**	**68**	8B	**80**	**4A**	**80**	**2A**	**2A**	DF	5A	**2A**
70		**80**	**B0**	65	**20**	**0A**	**0A**	48	**60**	**3A**	**40**	**15**	**15**	**80**	**3A**	**B0**	65
80		3F	16	30	60	A8	82	**20**	**1A**	**8F**	97	FA	F9	3F	00	F0	28
90		00	88	64	0D	0A	85	00	00	00	00	F0	00	00	E0	**01**	**20**
A0		11	17	20	34	50	03	04	05	07	0E	10	12	1F	27	3E	09
B0		09	0A	0D	18	00	E0	01	10	00	C0	01	68	00	D0	05	DC
C0		43	6B	10	29	59	0C	B0	00	03	0D	13	1C	02	63	02	85
D0		88	88	88	88	88	88	88	88	80	E6	C0	70	28	05	0A	02
E0		10	10	10	50	20	00	02	45	24	70	01	65	A4	53	90	0E
F0		FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF

Bold-faced letter →Data changed During Adjustment
others →Set value

1. FREQUENCY ADJUSTMENT

Purpose : Chroma subcarrier adjustment.

Symptom of Misadjustment :
No color on the monitor.(The burst shifts on the vectorscope.)

INPUT	ADJUSTMENT	M. POINT
	C610	TP601
MEASURE EQ.		SPEC.
Frequency counter		14.31818MHz ± 80Hz

Note : TP601, C610 : Main C.B.A.

PREPARATION

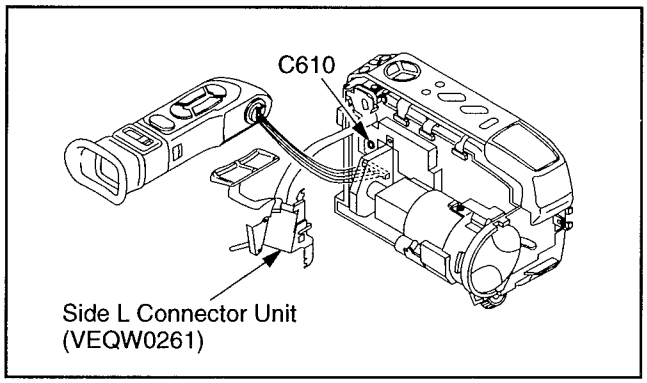


Fig. C1

2. BLANKING ADJUSTMENT

Purpose : BLANKING Adjustment.

Symptom of Misadjustment : TV picture is too white or too dark.

INPUT	ADDRESS	MEASURE POINT
	26	Pin 4 of VFKW0123B
MEASURE EQ.		SPEC.
Oscilloscope		See berow.

Note : Pin 4 of VFKW0123B : On TP adjustment PCB

Adjustment Procedure :
1) Connect a jumper wire between pins 1 and 5 of TP adjustment PCB / VFKW0123B.

2) Connect the oscilloscope at pin 4 of TP adjustment PCB / VFKW0123B.

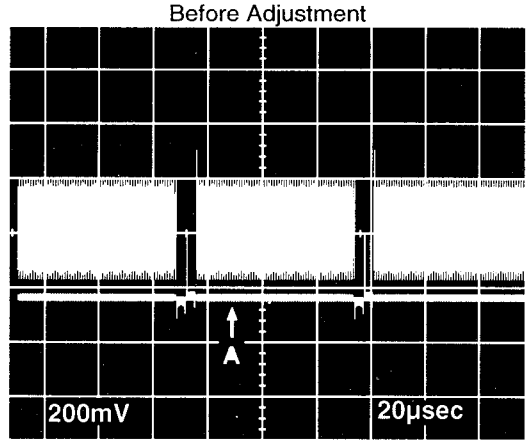
3) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : WRITE

4) Set address to 26.

5) Adjust the level of pin 4 of TP adjustment PCB / VFKW0123B using DATA INC and DEC buttons so that the level of the signal A becomes center of the waveform as shown in Fig. C2.

6) Remove the jumper wire between pins 1 and 5 of TP adjustment PCB / VFKW0123B.

Before Adjustment



After Adjustment

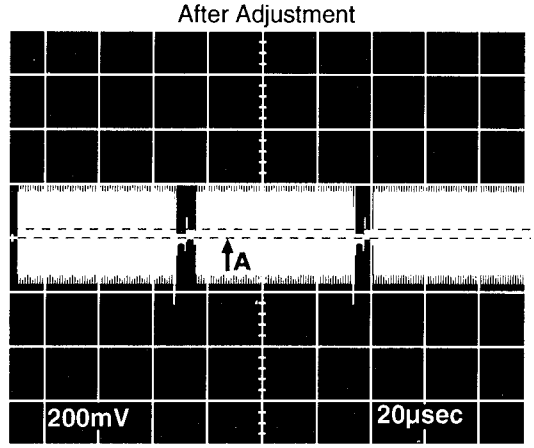


Fig. C2

3. VCO ADJUSTMENT

Purpose : In order to correct color in the playback mode.

Symptom of Misadjustment :
Abnormal color in the playback mode.

INPUT	ADDRESS	MEASURE POINT
VCR mode	69	Pin 29 of VFKW0123B
MEASURE EQ.		SPEC.
Frequency counter		629kHz ± 3kHz

Note : Pin 29 of VFKW0123B : On TP adjustment PCB

Adjustment Procedure :
1) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : WRITE

2) Set address to 8D and set data to 85.

3) Connect the frequency counter at pin 29 of TP adjustment PCB / VFKW0123B.

4) Set address to 69.

5) Adjust data at address 69 by DATA INC and DEC buttons so that the frequency becomes 629kHz ± 3kHz.

6) Set address to 8D and set data to 80, then set data to 00.

4. SYNC LEVEL ADJUSTMENT

Purpose : Set horizontal SYNC.

Symptom of Misadjustment :
SYNC miss operation horizontal line or no picture.

INPUT	ADDRESS	MEASURE POINT
Fade mode	6A	Video output jack (75Ω Terminated)
MEASURE EQ.		SPEC.
Oscilloscope		286mV ± 10mV

Adjustment Procedure :
1) Terminate the video output jack with 75Ω resistor and connect oscilloscope as shown in Fig. C3.

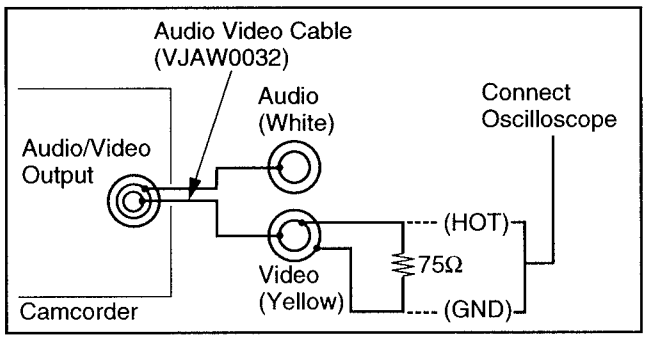


Fig. C3

2) Fade on.
   1. Digital adjustment control tool setting.
      COLOR BAR : OFF
      MEMORY : EEPROM
      AREA : NORMAL
      MODE : WRITE

   2. Set address to 7C and set data to A0.

   3. Digital adjustment control tool setting.
      COLOR BAR : OFF
      MEMORY : Int. RAM
      AREA : NORMAL
      MODE : WRITE

   4. Set address to 1C and set data to 00.

   5. Set address to B0 and set data to 00.

   6. Set address to B1 and set data to 00.

3) Digital adjustment control tool setting.
   COLOR BAR : OFF
   MEMORY : EEPROM
   AREA : EXTEND
   MODE : WRITE

4) Set address to 6A .

5) Adjust the level of VIDEO OUT using DATA INC and DEC buttons so that the signal level becomes 286mV ± 10mV.

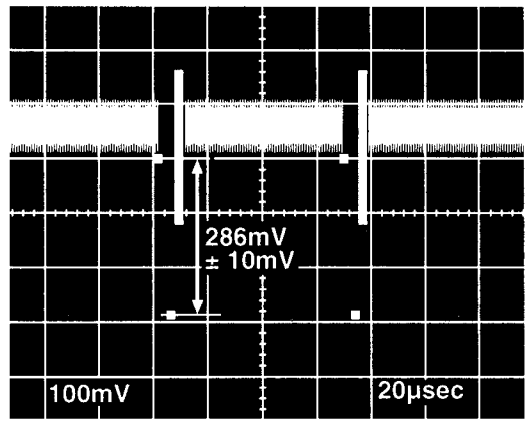


Fig. C4

6) Digital adjustment control tool setting.
   COLOR BAR : OFF
   MEMORY : EEPROM
   AREA : NORMAL
   MODE : WRITE

7) Set address to 7C and set data to 21. : Fade out

5. BURST LEVEL ADJUSTMENT

Purpose : Burst level adjustment.

Symptom of Misadjustment : No color.

INPUT	ADDRESS	MEASURE POINT
Fade mode	78, 7D	Video output jack (75Ω Terminated)
MEASURE EQ.		SPEC.
Oscilloscope		286mV ± 10mV

Adjustment Procedure :
1) Terminate the video output jack with 75Ω resistor and connect oscilloscope as shown in Fig C3.

2) Fade on.
   1. Digital adjustment control tool setting.
      COLOR BAR : OFF
      MEMORY : EEPROM
      AREA : NORMAL
      MODE : WRITE

   2. Set address to 7C and set data to A0.

   3. Digital adjustment control tool setting.
      COLOR BAR : OFF
      MEMORY : Int. RAM
      AREA : NORMAL
      MODE : WRITE

   4. Set address to 1C and set data to 00.

   5. Set address to B0 and set data to 00.

   6. Set address to B1 and set data to 00.

3) Adjust EE BURST LEVEL CONTROL

   1. Digital adjustment control tool setting.
      COLOR BAR : OFF
      MEMORY : EEPROM
      AREA : EXTEND
      MODE : WRITE

2. Set address to 78.

3. Adjust the level of VIDEO OUT using DATA INC and DEC buttons within a data range of 00 ~ 7F so that the signal level becomes 286mV ± 10mV.

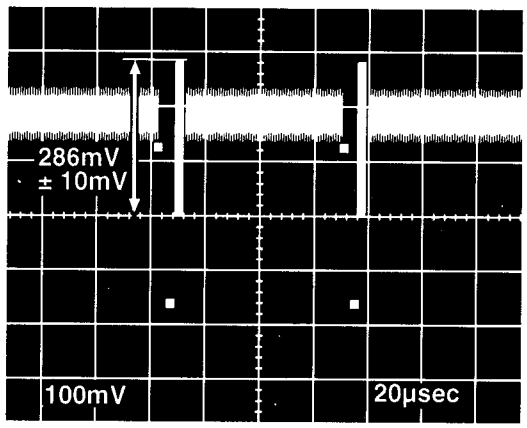


Fig. C5

4) After the adjustment.
Write the data of address 78 in the memo box for future use.----------

MEMO

5) Set address to 7D, then write the data of address 78 into the address 7D.

6) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : NORMAL
MODE : WRITE

7) Set address to 7C and set data to 21. : Fade out

6. HALL AMP ADJUSTMENT

Purpose : Hall amp adjustment.

Symptom of Misadjustment :
Hunting occurs or the focus stops.

INPUT	ADDRESS	MEASURE POINT
	60, 61	
MEASURE EQ.		SPEC.
		See berow.

Adjustment Procedure :
1) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : WRITE

2) Set address to 27 and set data to 00 to iris close.

3) Before adjustment.
1. Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : Int. RAM
AREA : NORMAL
MODE : READ

2. Set address to FE.

3. Read the data of address FE and write the data in the memo box.----------

MEMO

If the data of address FE is "64", the adjustment is not necessary.
If the data of address FE is except "64", go to step 4).

4) Adjust HALL AMP OFFSET CONTROL

1. Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : WRITE

2. Set address to 60, and change the data using data INC and DEC buttons to adjust data of address FE to "64". Then go back to step 3). (± 1 data)

If the data of address FE is more than 64, decrease data of address 60 using data DEC button.
If the data of address FE is less than 64, increase data of address 60 using data INC button.

5) Set address to 27 and set data to 03 to iris open.

6) Before adjustment.

1. Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : Int. RAM
AREA : NORMAL
MODE : READ

2. Set address to FE.

3. Read the data of address FE and write the data in the memo box.----------

MEMO

If the data of address FE is "F9", the adjustment is OK.
If the data of address FE is except "F9", go to step 7).

7) Adjust HALL AMP GAIN CONTROL.

1. Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : WRITE

2. Set address to 61. And change the data using DATA INC and DEC buttons to adjust data of address FE to "F9". Then go back to step 6). (± 4 data)

If the data of address FE is more than F9, decrease data of address 61 using data DEC button.
If the data of address FE is less than F9, increase data of address 61 using data INC button.

8) Set address to 27 and set data to 01.

9) Confirm and repeat the steps 1) ~ 7).

7-1. AUTO FOCUS ADJUSTMENT (With Infinity Lens)

Purpose : Optical focus adjustment.

Symptom of Misadjustment : Out of focus.

INPUT	ADDRESS	MEASURE POINT
Infinity Lens	62, 63, 65, 66, 4F	
MEASURE EQ.		SPEC.

Note : Infinity Lens (Parts No. YTU92001C, YTU92001-50, YTU92001-108, YTU93072M)

Adjustment Procedure :

1) Power on the camcorder.

2) Digital adjustment control tool setting.
   COLOR BAR : OFF
   MEMORY : EEPROM
   AREA : EXTEND
   MODE : WRITE

3) Set address 27 and set data to 03 to iris open.

4) Set address to 65 and set data to 80.

5) Set address to 4F and set data to 39.

6) Set address to 63 and set data to FF.

7) Power off once and power on the camcorder again.

8) Set address to 63 and set data to BF for auto focus adjustment.

9) Digital adjustment control tool setting.
   COLOR BAR : OFF
   MEMORY : Int. RAM
   AREA : EXTEND
   MODE : READ

10) Set address to FB.
    Read the data is "0A", the auto adjustment is finished.
    If not, wait 20 seconds and confirm address FB again.

11) Set address to FD.
    Read the data of address FD and write the data in the memo box.----------

MEMO A

12) Set address to FE.
    Read the data of address FE and write the data in the memo box.----------

MEMO B

13) Digital adjustment control tool setting.
    COLOR BAR : OFF
    MEMORY : EEPROM
    AREA : EXTEND
    MODE : WRITE

14) Set address to 65, then write the data of address FD (memo box A) into the address 65.

15) Set address to 62, then write the data of address FE (memo box B) into the address 62.

16) Set address to 63 and set data to FF.

17) Set address to 4F and set data to B9.

18) Power off once and power on the camcorder again.

19) Set address to 63 and set data to DF for auto focus adjustment.

20) Digital adjustment control tool setting.
    COLOR BAR : OFF
    MEMORY : Int. RAM
    AREA : EXTEND
    MODE : READ

21) Set address to FC.
    Read the data is "07", the adjustment is finished.
    If not, wait 20 seconds and confirm address FC again.

22) Set address to FF.
    Read the data of address FF and write the data in the memo box.----------

MEMO

23) Digital adjustment control tool setting.
    COLOR BAR : OFF
    MEMORY : EEPROM
    AREA : EXTEND
    MODE : WRITE

24) Set address to 66, then write the data of address FF into the address 66.

25) Set address to 63 and set data to FF.

26) Set address to 4F and set data to F9.

27) Power off once and power on the camcorder again.

28) Change the focus mode to the manual.

29) Shoot an object from the camera and change the zoom position to the end of telephoto.

30) Adjust the manual focus wheel so that the picture on the EVF/TV monitor becomes in focus point.

31) Confirm the focus while zooming from TELE to WIDE.
    If the focus is OK, the adjustment is finished.

32) If focus is NG, go back to step 4).

33) Set address to 27 and set data to 01.

7-2. AUTO FOCUS ADJUSTMENT (Without Infinity Lens)

Purpose : Optical focus adjustment.

Symptom of Misadjustment : Out of focus.

INPUT	ADDRESS	MEASURE POINT
	62, 65, 66, 4F	
MEASURE EQ.		SPEC.

Adjustment Procedure :

1) Power on the camcorder.

2) Digital adjustment control tool setting.
   COLOR BAR : OFF
   MEMORY : EEPROM
   AREA : EXTEND
   MODE : WRITE

3) Set address to 27 and set data to 03 to iris open.

4) Set address to 4F and set data to 39 to put the camcorder into the test mode.

5) Set address to 65 and set data to 7F.

6) Set address to 66 and set data to 80.

7) Power off once and power on the camcorder again.

8) Set address to 62 and set data to FF.

9) Adjust the data of address 62 to get in focus picture by decreasing the number of data.

10) Set address to 4F and set data to F9 to return the camcorder to the normal operation mode.

11) Power off the camcorder.

12) Power on the camcorder and set the camera mode to normal.

13) Change the focus mode to the manual.

14) Shoot an object more than 10ft from the camera and change the zoom position to the end of TELE.

15) Adjust the manual focus wheel so that the picture on the EVF/TV monitor becomes in focus point.

16) Confirm the focus at the middle zooming point while zooming from TELE to WIDE.
   If there is in focus, go to step 18).

17) If there is out of the focus;
   When the focus point is at near side : set address to 66 and set data to A8.
   When the focus point is at far side : set address to 66 and set data to 58.

18) Set address to 27 and set data to 01.

8. BLOOMING (SMEARING) ADJUSTMENT

Purpose : CCD Section high luminance overflow adjustment.

Symptom of Misadjustment : Color loss.

INPUT	ADDRESS	MEASURE POINT
Refer to Fig. C6	24	
MEASURE EQ.		SPEC.
Monitor TV		Minimum Blooming

Adjustment Procedure :
Light source should be a 100V~120V 20W tungsten lamp. The illumination level in a dark room should be less then 100lux, when the tungsten lamp is off.

1) Digital adjustment control tool setting.
   COLOR BAR : OFF
   MEMORY : EEPROM
   AREA : EXTEND
   MODE : WRITE

2) Set address to 27 and set data to 03 to iris open.

3) Set the shooting angle as shown in Fig. C6.

4) Set address to 24.

5) Adjust the BLOOMING (SMEARING) CONTROL using DATA INC and DEC buttons so that blooming (smearing) on the monitor TV reaches at a minimum without loss of color as shown in Fig. C7.

6) Set address to 27 and set data to 01.

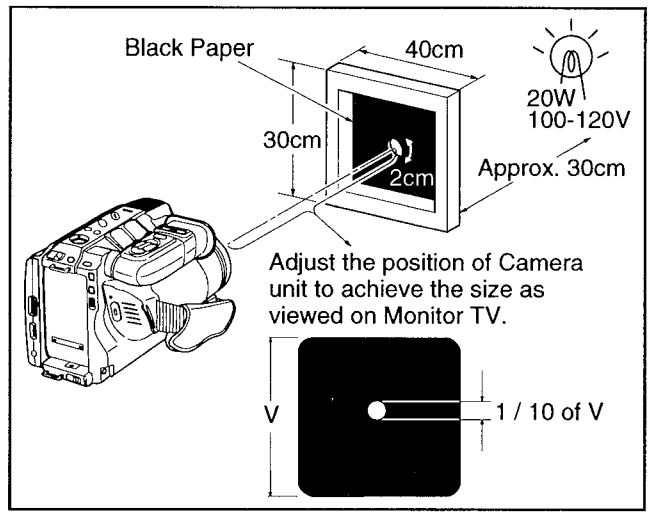


Fig. C6

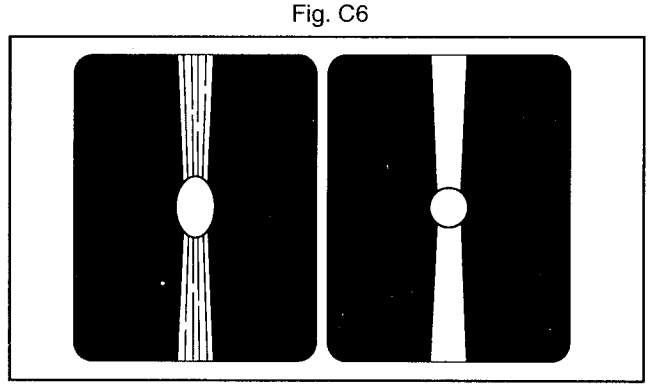


Fig. C7

9. GAMMA ADJUSTMENT

Purpose : Set the correct gamma compensation level.

Symptom of Misadjustment : The gray scale shift.

INPUT	ADDRESS	MEASURE POINT
Gray scale chart	21	Video output jack (75Ω Terminated)
MEASURE EQ.		SPEC.
Oscilloscope		See below

Adjustment Procedure :

1) The initial data must be correctly input.

2) Set up the shooting angle (Using either the halogen lamp or light box) as shown in Fig. C9.

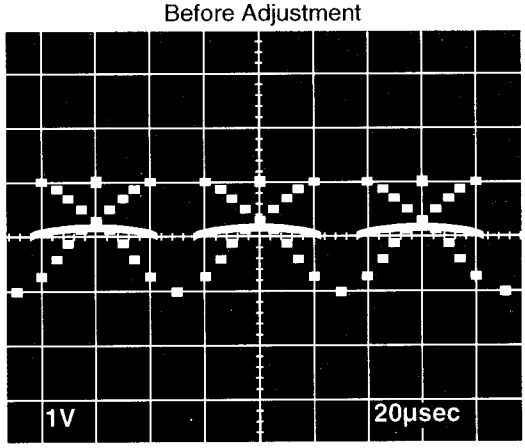
3) Terminate the video output jack with 75Ω resistor and Connect the oscilloscope as shown in Fig. C3.

4) Digital adjustment control tool setting.
   COLOR BAR : OFF
   MEMORY : EEPROM
   AREA : EXTEND
   MODE : WRITE

5) Set address to 21.

6) Adjust the level of video out using DATA INC and DEC buttons so that the signal level becomes 1.5Vp-p as shown in Fig. C8.

Before Adjustment



After Adjustment

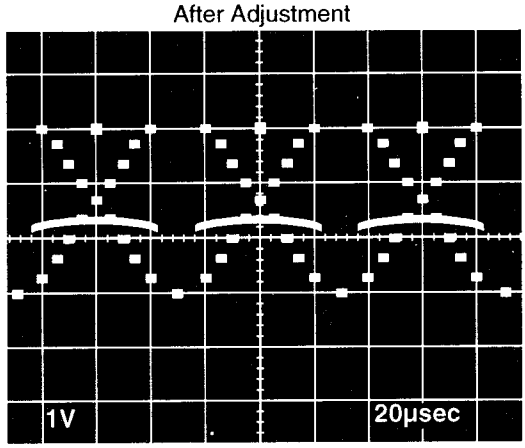


Fig. C8

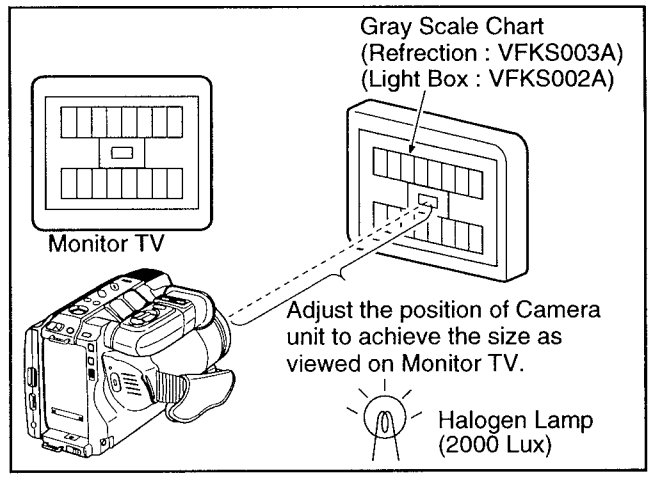

Gray Scale Chart
(Refrection : VFKS003A)
(Light Box : VFKS002A)
Monitor TV
Adjust the position of Camera unit to achieve the size as viewed on Monitor TV.
Halogen Lamp
(2000 Lux)

Fig. C9

10. A/D INPUT ADJUSTMENT

Purpose : A/D convertor input level adjustment.

Symptom of Misadjustment :
The picture is sometimes too dark or sometimes too bright.

INPUT	ADDRESS	MEASURE POINT
Gray scale chart	22	Pin 2 of VFKW0123B
MEASURE EQ.		SPEC.
Oscilloscope		600mV ± 20mV

Note : Pin 2 of VFKW0123B : On TP adjustment PCB

Adjustment Procedure :

1) Set up the shooting angles as shown in Fig. C9.

2) Digital adjustment control tool setting.
   COLOR BAR : OFF
   MEMORY : EEPROM
   AREA : EXTEND
   MODE : WRITE

3) Set address to 22.

4) Adjust the levels of pin 2 of TP adjustment PCB / VFKW0123B using DATA INC and DEC buttons so that the signal level becomes 600mV ± 20mV.

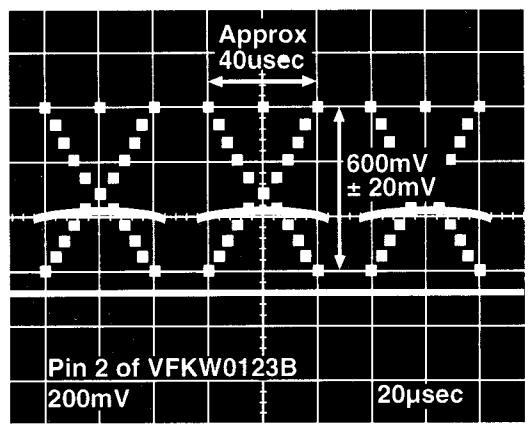


Fig. C10

11. IRIS PWM ADJUSTMENT

Purpose : Set the iris opening.

Symptom of Misadjustment :
The iris is opened or closed too much.

INPUT	ADDRESS	MEASURE POINT
Gray scale chart	20, AF	
MEASURE EQ.		SPEC.
		See below

Note : H.S.S. is 1/60. Using the infinity lens is 1/100.

Adjustment Procedure :
1) Set up the shooting angles as shown in Fig. C9.

2) Before Adjustment.
1. Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : Int. RAM
AREA : NORMAL
MODE : READ

2. Set address to AF.

3. Read the data of address AF and write the data in the memo box.

MEMO

If the data of address AF is "70", the adjustment is not necessary.
If the data of address AF is except "70", go to step 3).

3) Adjust IRIS PWM CONTROL.
1. Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : WRITE

2. Set address to 20, and change the data using data INC* and DEC* buttons to adjust data of address AF to "70". Then go back to step 2).

*If the data of address AF is more than 70, decrease data of address 20 using data DEC button.
If the data of address AF is less than 70, increase data of address 20 using data INC button.

12. YH LEVEL ADJUSTMENT

Purpose : Set standard signal level.

Symptom of Misadjustment :
The picture is sometime too dark or sometime too bright.

INPUT	ADDRESS	MEASURE POINT
Gray scale chart	D7, 9E, 9F	Video output jack (75Ω Terminated)
MEASURE EQ.		SPEC.
Oscilloscope		690mV ± 25mV

Note : Confirm following adjustment items before this adjustment.
4. SYNK LEVEL ADJUSTMENT
11. IRIS PWM ADJUSTMENT

Adjustment Procedure :
1) Set up the shooting angles as shown in Fig. C9.

2) Terminate the video output jack with 75Ω resistor and connect oscilloscope as shown in Fig. C3.

3) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : NORMAL
MODE : WRITE

4) Set address to 83 and set data to FE.

5) Set address to BE and set data to 0C.

6) Set address to D7.

7) Adjust the level of Video out using DATA INC and DEC buttons so that the signal level becomes 690mV ± 25mV.

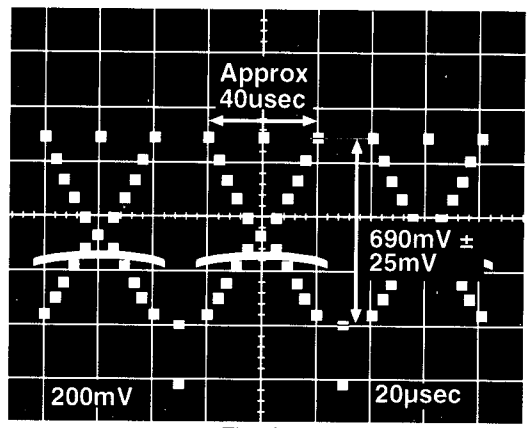


Fig. C11

8) After the adjustment.
1. Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : Int. RAM
AREA : EXTEND
MODE : READ

2. Set address to 2E.

3. Read the data of address 2E.
*Write the data from address 2E in the memo box to the under for future use.

Read Addresses	2E	2F
Data		
Write Addresses	9E	9F

4. Repeat steps 2. ~ 3. using address 2F.

5. Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : WRITE

6. Set address to 9E, then write the data of address 2E into the address 9E.

7. Set address to 9F, then write the data of address 2F into the address 9F.

9) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : NORMAL
MODE : WRITE

10) Set address to 83 and set data to FF.

11) Set address to BE and set data to 8C.

13. PEDESTAL LEVEL ADJUSTMENT

Purpose : Set black signal level.

Symptom of Misadjustment :
The picture is too white or too dark.

INPUT	ADDRESS	MEASURE POINT
Gray scale chart	13	Pin 16 of VFKW0123B
MEASURE EQ.		SPEC.
Oscilloscope		80mV ± 5mV

Note : Pin 16 of VFKW0123B : On TP adjustment PCB

Adjustment Procedure :
1) Set up the shooting angle as shown in Fig. C9.

2) Connect the oscilloscope at pin 16 of TP adjustment PCB / VFKW0123B.

3) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : WRITE

4) Set address to 13.

5) Adjust the level of pin 16 of TP adjustment PCB / VFKW0123B using DATA INC and DEC buttons so that the signal level becomes 80mV ± 5mV.

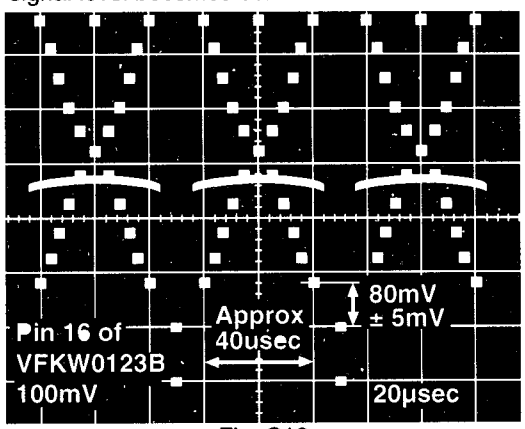


Fig. C12

14 WB ADJUSTMENT

14-1. WHITE BALANCE PRESET ADJUSTMENT

Purpose : Measure the signal level.

Symptom of Misadjustment : Color is added to white.

INPUT	ADDRESS	MEASURE POINT
Gray scale chart	04, 05, 06, 07	Video output jack
MEASURE EQ.		SPEC.
Vectorscope		Center

Note : After completion of the WHITE BALANCE Adjustment. Perform the "14-4. COLOR GAIN, COLOR PHASE and R-Y, B-Y GAIN Adjustment".

Adjustment Procedure :
1) Indoor mode setting.

1. Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : Int. RAM
AREA : NORMAL
MODE : WRITE

2. Set address to 1E and set data to 01.

2) Aim the camera at the gray scale chart as shown in Fig.C9. Using a 3050°K light box or another 3050°K source.

3) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : NORMAL
MODE : WRITE

4) Set address to 04.

5) Adjust the R-Y OFFSET CONTROL using DATA INC and DEC buttons so that the color vectors move to the center of vectorscope as shown in Fig. C14.

6) Set address to 06.

7) Adjust the B-Y OFFSET CONTROL using DATA INC and DEC buttons so that the color vectors move to the center of vectorscope as shown in Fig. C14.

8) Repeat steps 4) ~ 7) until adjustment is optimum.

9) Outdoor mode setting.

1. Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : Int. RAM
AREA : NORMAL
MODE : WRITE

2. Set address to 1E and set data to 02.

10) Attach the color temperature conversion filter. 80A or equivalent and color compensating filter CC05M, to converts 3050°K to 5100°K, to the front of the lens unit (Fig. C13).

11) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : NORMAL
MODE : WRITE

12) Set address to 05.

13) Adjust the R-Y OFFSET CONTROL using DATA INC and DEC buttons so that the color vectors move to the center of vectorscope as shown in Fig. C14.

14) Set address to 07.

15) Adjust the B-Y OFFSET CONTROL using DATA INC and DEC buttons so that the color vectors move to the center of vectorscope as shown in Fig. C14.

16) Repeat steps 11) ~ 15) until adjustment is optimum.

17) Auto WB mode setting.

1. Digital adjustment control tool setting.
   COLOR BAR : OFF
   MEMORY : Int. RAM
   AREA : NORMAL
   MODE : WRITE

2. Set address to 1E and set data to 00.

18) Remove the filter.

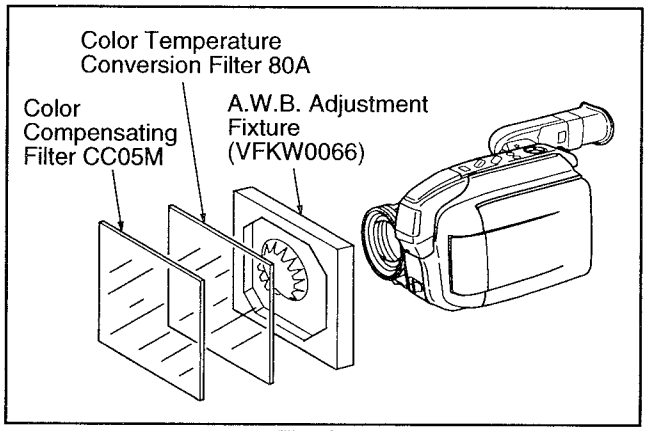
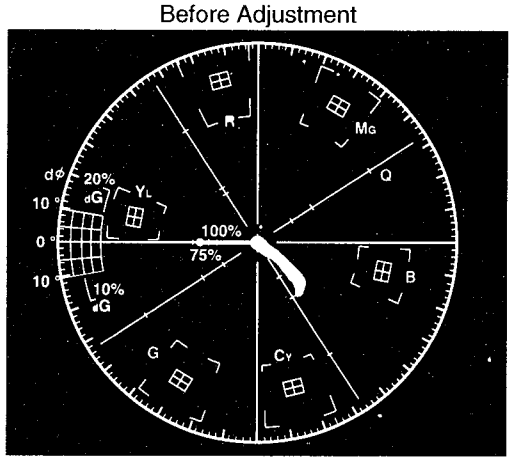


Fig. C13

Before Adjustment



After Adjustment

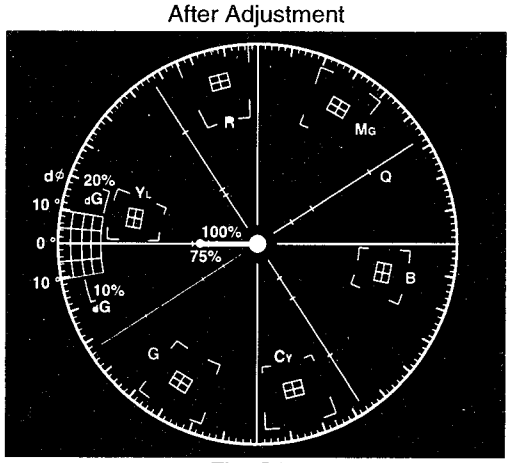


Fig. C14

14-2. AUTO WHITE BALANCE 3050°K ADJUSTMENT

Purpose : Set standard white level for each color temperature.

Symptom of Misadjustment :
White becomes bluish or reddish.

INPUT	ADDRESS	MEASURE POINT
Gray scale chart	16, 18, 1A	
MEASURE EQ.		SPEC.

Adjustment Procedure :
1) Aim the camera at the gray scale chart as shown in Fig.C9.
   Using a 3050°K light box or another 3050°K source.

2) Digital adjustment control tool setting.
   COLOR BAR : OFF
   MEMORY : Int. RAM
   AREA : NORMAL
   MODE : READ

3) Set address to 60.

4) Read the data from address 60.
   *Write the data from address 60 in the memo box to the under for future use.

Read Addresses	60	61	62
Data			
Write Addresses	16	18	1A

5) Repeat steps 3) ~ 4) using address 61 and 62.

6) Digital adjustment control tool setting.
   COLOR BAR : OFF
   MEMORY : EEPROM
   AREA : NORMAL
   MODE : WRITE

7) Set address to 16, then write the data from address 60 in the address 16.

8) Set address to 18, then write the data from address 61 in the address 18.

9) Set address to 1A, then write the data from address 62 in the address 1A.

14-3. AUTO WHITE BALANCE 5100°K ADJUSTMENT

Purpose : Set standard white level for each color temperature.

Symptom of Misadjustment :
White becomes bluish or reddish.

INPUT	ADDRESS	MEASURE POINT
Gray scale chart	17, 19, 1B	
MEASURE EQ.		SPEC.

Adjustment Procedure :
1) Aim the camera at the gray scale chart as shown in Fig.C9.
   Using a 3050°K light box or another 3050°K source.

2) Attach the color temperature conversion filter, 80A or equivalent and color compensating filter CC05M, to converts 3050°K to 5100°K, to the front of the lens unit (Fig. C13).

3) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : Int. RAM
AREA : NORMAL
MODE : READ

4) Set address to 60.

5) Read the data from address 60.
*Write the data from address 60 in the memo box to the under for future use.

Read Addresses	60	61	62
Data			
Write Addresses	17	19	1B

6) Repeat steps 4) ~ 5) using address 61 and 62.

7) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : NORMAL
MODE : WRITE

8) Set address to 17, then Write the data from address 60 in the Address 17.

9) Set address to 19, then Write the data from address 61 in the Address 19.

10) Set address to 1B, then Write the data from address 62 in the Address 1B.

14-4. COLOR GAIN, COLOR PHASE AND R-Y, B-Y GAIN ADJUSTMENT

Purpose : Set Correct color temperature.

Symptom of Misadjustment : Color phase shift.

INPUT	ADDRESS	MEASURE POINT
Color chip chart	08, 0A, 0C, 0E 09, 0B, 0D, 0F	Video output jack
MEASURE EQ.		SPEC.
Vectorscope		

Note : Confirm following adjustment item before this adjustment.
12. YH LEVEL ADJUSTMENT

Adjustment Procedure :
1) Indoor mode setting.

1. Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : Int. RAM
AREA : NORMAL
MODE : WRITE

2. Set address to 1E and set data to 01.

2) Aim the camera at the color chip chart as shown in Fig. C15.

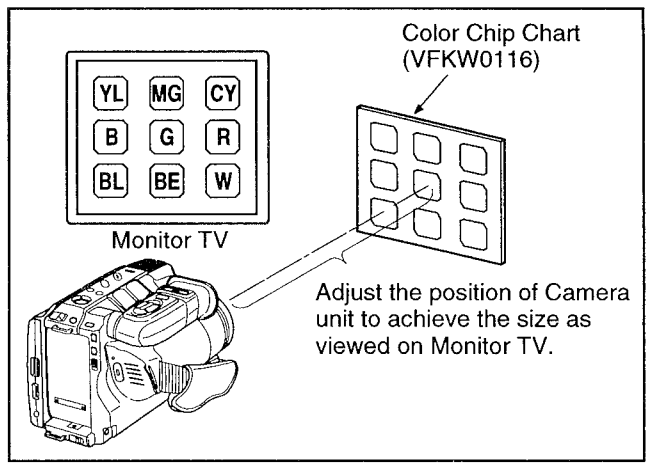


Fig. C15

3) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : NORMAL
MODE : WRITE

4) Set address to 0C.

5) Use DATA INC and DEC buttons until the address 0C (R Phase) signal in the vectorscope is as in Fig. C16 and Fig. C17.

6) Set address to 08.

7) Use DATA INC and DEC buttons until the address 08 (R Gain) signal level becomes 200 % ± 5 % of the burst level.

8) Set address to 0E.

9) Use DATA INC and DEC buttons until the address 0E (Yellow Phase) signal in the vectorscope is as in Fig. C16 and Fig. C17.

10) Set address to 0A.

11) Use DATA INC and DEC buttons until the address 0A (Yellow Gain) signal level becomes 140 % ± 5 % of the burst level.

12) Repeat steps 4) ~ 11) until adjustment is optimum.

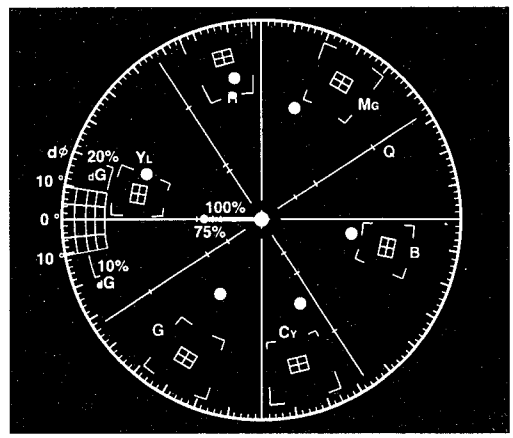


Fig. C16

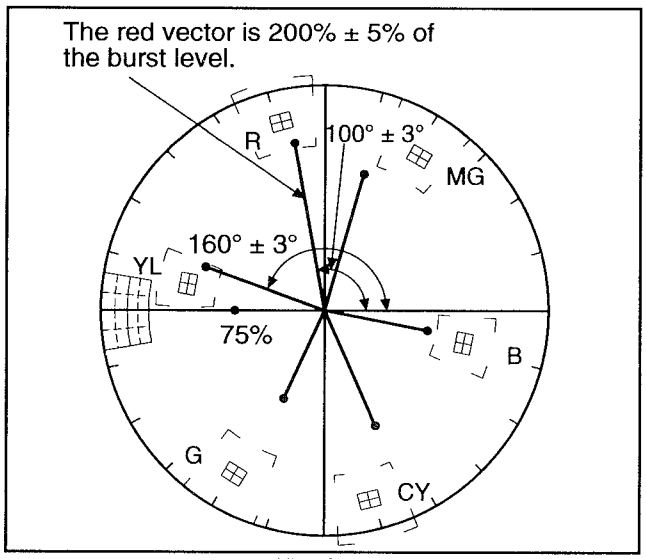


Fig. C17

13) Outdoor mode setting.

1. Digital adjustment control tool setting.
   COLOR BAR : OFF
   MEMORY : Int. RAM
   AREA : NORMAL
   MODE : WRITE

2. Set address to 1E and set data to 02.

14) Attach the color temperature conversion filter. 80A or equivalent and color compensating filter CC05M, to converts 3050°K to 5100°K, to the front of the lens unit (Fig. C13).

15) Digital adjustment control tool setting.
   COLOR BAR : OFF
   MEMORY : EEPROM
   AREA : NORMAL
   MODE : WRITE

16) Set address to 0D.

17) Use DATA INC and DEC buttons until the address 0D (R Phase) signal in the vectorscope is as in Fig. C18 and Fig. C19.

18) Set address to 09.

19) Use DATA INC and DEC buttons until the address 09 (R Gain) signal level becomes 170 % ± 5 % of the burst level.

20) Set address to 0F.

21) Use DATA INC and DEC buttons until the address 0F (Yellow Phase) signal in the vectorscope is as in Fig. C18 and Fig. C19.

22) Set address to 0B.

23) Use DATA INC and DEC buttons until the address 0B (Yellow Gain) signal level becomes 130 % ± 5 % of the burst level.

24) Auto WB mode setting.

1. Digital adjustment control tool setting.
   COLOR BAR : OFF
   MEMORY : Int. RAM
   AREA : NORMAL
   MODE : WRITE
2. Set address to 1E and set data to 00.

25) Remove the filter.

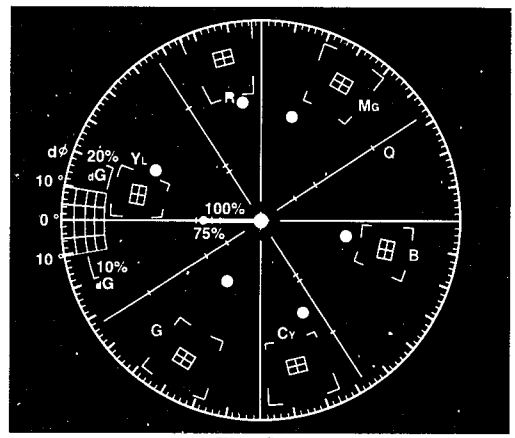


Fig. C18

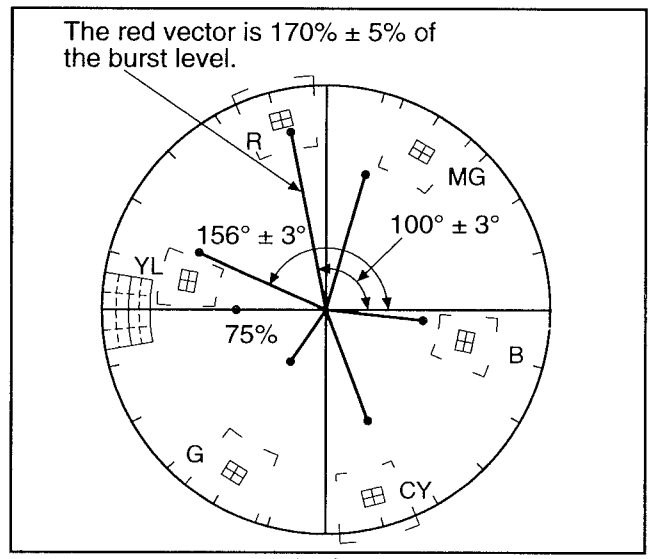


Fig. C19

COLOR EVF PORTION (Model : B)

COMPARISON CHART
OF MODELS & MARKS

MODEL No.	MARK
PV-L657	A
PV-L757	B

PREPARATION

The following adjustment are for the liquid crystal display color electronic viewfinder (COLOR EVF).

(1) Connect the connector P3 to P901.
(2) The camera and VCR circuit must be completely aligned before viewfinder adjustments are made.
(3) Set the BRIGHT CONTROL (VR901) to the click position as shown in Fig. E1.
(4) Before EVF adjustments, turn the power on and confirm that the LCD back light is on and input the reference data (B Table).

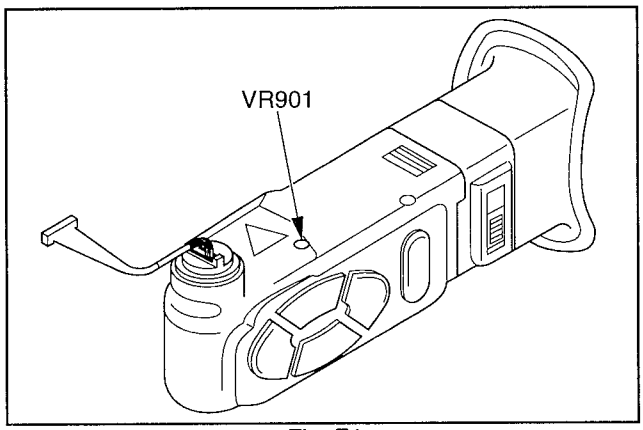


Fig. E1

1. V-OSC ADJUSTMENT

Purpose : Set EVF horizontal / vertical sync.

Symptom of Misadjustment :
Miss synchronization or no picture.

INPUT	ADDRESS	MEASURE POINT
	05	Pin 3 of P901
MEASURE EQ.		SPEC.
Frequency counter		15.735KHz ± 50KHz

Note : Pin 3 of P901 : Color EVF A C.B.A.

Adjustment Procedure :
1) Connect the frequency counter to Pin 3 of P901.

2) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : WRITE

3) Set address to 05.

4) Adjust data at address 05 by DATA INC and DEC buttons so that the frequency becomes 15.735KHz ± 50KHz.

2. CENTERING ADJUSTMENT

Purpose : Optimize EVF picture position.

Symptom of Misadjustment : EVF picture off center.

INPUT	ADDRESS	MEASURE POINT
Gray Scale Chart	0C	Pin 1 of P901, TP905
MEASURE EQ.		SPEC.
Oscilloscope		5.6µsec ± 0.5µsec

Note : Pin 1 of P901, TP905 : Color EVF A C.B.A.

Adjustment Procedure :
1) Aim the camera at the gray scale chart.

2) Connect the oscilloscope to Pin 1 of P901 and TP905. Then, change the oscilloscope mode to Add.

3) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : WRITE

4) Set address to 0C.

5) Adjust data at address 0C by DATA INC and DEC buttons so that the signal level becomes 5.6µsec ± 0.5µsec.

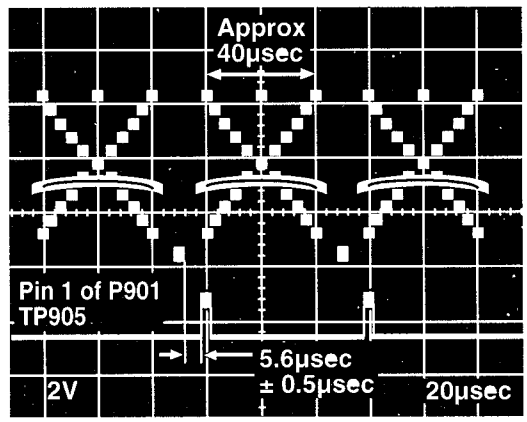


Fig. E2

3. PEDESTAL LEVEL ADJUSTMENT

Purpose : Set the black signal level.

Symptom of Misadjustment :
The picture is too white or too dark.

INPUT	ADDRESS	MEASURE POINT
Gray Scale Chart	0F	TP901
MEASURE EQ.		SPEC.
Oscilloscope		3.1V ± 0.05V

Note : TP901 : Color EVF A C.B.A.

Adjustment Procedure :
1) Set VR902 to click position.

2) Aim the camera at the gray scale chart.

3) Connect the oscilloscope to TP901.

4) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : WRITE

5) Set address to 0F.

6) Adjust data at address 0F by DATA INC and DEC buttons so that the signal level becomes 3.1V ± 0.05V.

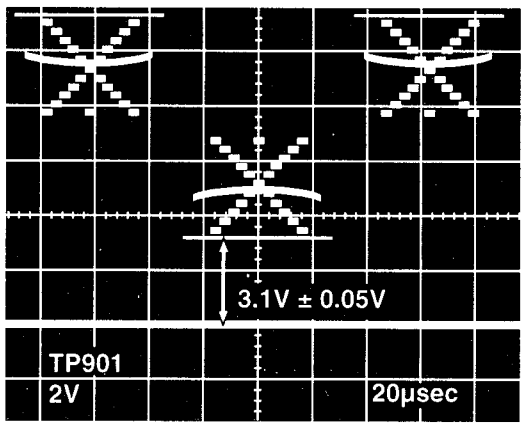


Fig. E3

4. CONTRAST ADJUSTMENT

Purpose : Contrast adjustment.

Symptom of Misadjustment :
The EVF picture becomes blackish or whitish.

INPUT	ADDRESS	MEASURE POINT
Gray Scale Chart	03	TP901
MEASURE EQ.		SPEC.
Oscilloscope		2.5V ± 0.1V

Note : TP901 : Color EVF A C.B.A.

Adjustment Procedure :
1) Aim the camera at the gray scale chart.

2) Connect the oscilloscope to TP901.

3) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : WRITE

4) Set address to 03.

5) Adjust data at address 03 by DATA INC and DEC buttons so that the signal level becomes 2.5V ± 0.1V.

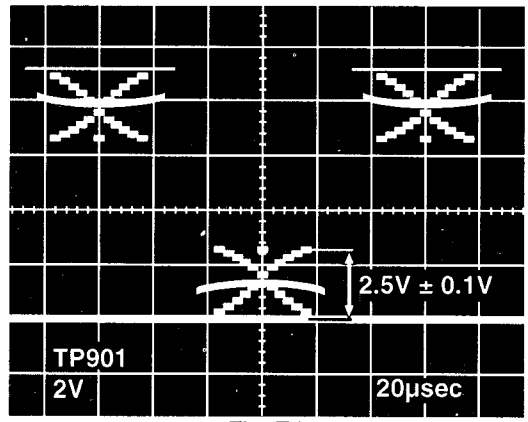


Fig. E4

5. RB OUTPUT DC LEVEL ADJUSTMENT

Purpose : RB output DC level adjustment.

Symptom of Misadjustment :
The EVF picture becomes reddish and bluish.

INPUT	ADDRESS	MEASURE POINT
Gray Scale Chart	01, 06	TP901, TP902, TP903
MEASURE EQ.		SPEC.
Digital volt meter		TP901 DC ± 0.1V

Note : TP901, TP902, TP903 : Color EVF A C.B.A.

Adjustment Procedure :
1) Aim the camera at the gray scale chart.

2) Connect the Digital volt meter to TP901.

3) Read the voltage of TP901 and write the data in the memo box for future use.

MEMO

4) Connect the Digital volt meter to TP902.

5) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : WRITE

6) Set address to 01.

7) Adjust data at address 01 by DATA INC and DEC buttons so that the voltage becomes voltage of TP901 ± 0.1V.

8) Connect the Digital volt meter to TP903.

9) Set address to 06.

10) Adjust data at address 06 by DATA INC and DEC buttons so that the voltage becomes voltage of TP901 ± 0.1V.

6. RB SUB PEDESTAL LEVEL ADJUSTMENT

Purpose : Set the black signal level.

Symptom of Misadjustment :
The picture is too white or too dark.

INPUT	ADDRESS	MEASURE POINT
Gray Scale Chart	0A, 0D	TP902, TP903
MEASURE EQ.		SPEC.
Oscilloscope		3.1V ± 0.05V

Note : TP902, TP903 : Color EVF A C.B.A.

Adjustment Procedure :
1) Aim the camera at the gray scale chart.

2) Connect the oscilloscope to TP902.

3) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : WRITE

4) Set address to 0D.

5) Use DATA INC and DEC buttons to adjust the level of TP902 so that the signal level become 3.1V ± 0.05V.

6) Connect the oscilloscope to TP903.

7) Set address to 0A.

8) Use DATA INC and DEC buttons to adjust the level of TP903 so that the signal level become 3.1V ± 0.05V.

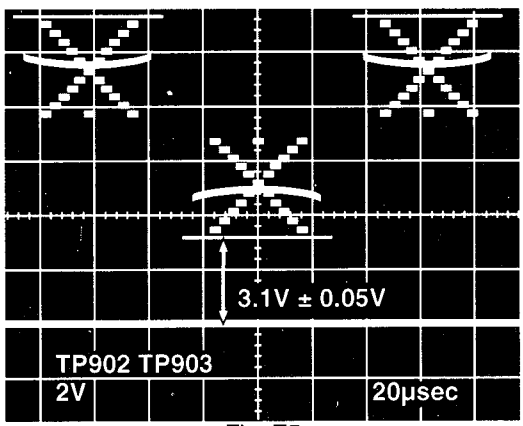


Fig. E5

7. RB SUB CONTRAST ADJUSTMENT

Purpose : RB contrast adjustment.

Symptom of Misadjustment :
The EVF picture becomes reddish or bluish.

INPUT	ADDRESS	MEASURE POINT
Gray Scale Chart	0B, 07	TP902, TP903
MEASURE EQ.		SPEC.
Oscilloscope		2.5V ± 0.1V

Note : TP902, TP903 : Color EVF A C.B.A.

Adjustment Procedure :
1) Aim the camera at the gray scale chart.

2) Connect the oscilloscope to TP902.

3) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : WRITE

4) Set address to 0B.

5) Use DATA INC and DEC buttons to adjust the level of TP902 so that the signal level become 2.5V ± 0.1V.

6) Connect the oscilloscope to TP903.

7) Set address to 07.

8) Use DATA INC and DEC buttons to adjust the level of TP903 so that the signal level become 2.5V ± 0.1V.

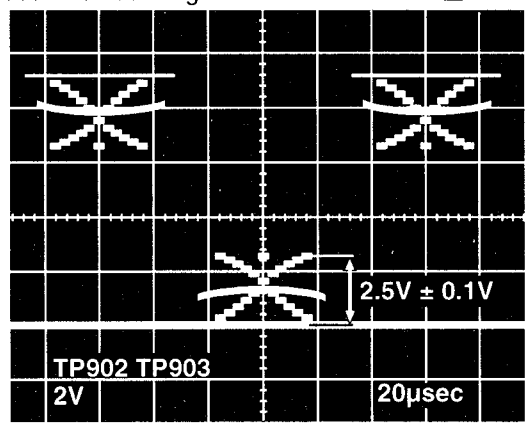


Fig. E6

8. COLOR GAIN ADJUSTMENT

Purpose : Color gain adjustment.

Symptom of Misadjustment : No color.

INPUT	ADDRESS	MEASURE POINT
Color bars chart	0E	TP902
MEASURE EQ.		SPEC.
Oscilloscope		A = 0.3V ± 0.05V

Note : TP902 : Color EVF A C.B.A.

Adjustment Procedure :
1) Aim the camera at the color bar chart.

2) Connect the oscilloscope to TP902.

3) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : WRITE

4) Set address to 0E.

5) Adjust data at address 0E by DATA INC and DEC buttons so that the signal level becomes A = 0.3V ± 0.05V.

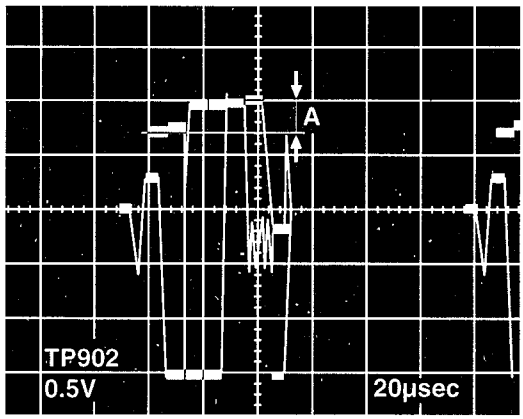


Fig. E7

9. TINT ADJUSTMENT

Purpose : Color Phase adjustment.

Symptom of Misadjustment : Miss-color.

INPUT	ADDRESS	MEASURE POINT
Color bars chart	08	TP903
MEASURE EQ.		SPEC.
Oscilloscope		B = 0.3V ± 0.05V

Note : TP903 : Color EVF A C.B.A.

Adjustment Procedure :
1) Aim the camera at the color bar chart.

2) Connect the oscilloscope to TP903.

3) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : WRITE

4) Set address to 08.

5) Adjust data at address 08 by DATA INC and DEC buttons so that the signal level becomes B = 0.3V ± 0.05V.

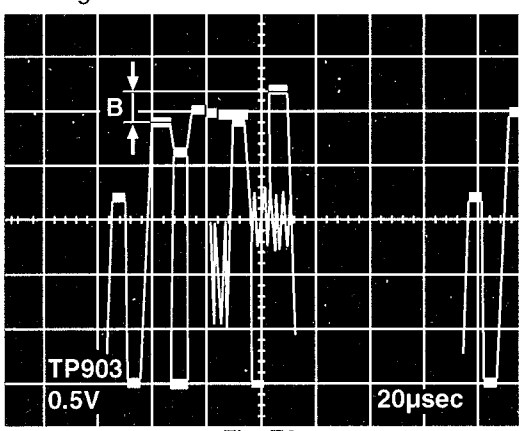


Fig. E8

10. WHITE BALANCE ADJUSTMENT

Purpose : Set standard white level for each color temperature.

Symptom of Misadjustment :
White becomes bluish or reddish.

INPUT	ADDRESS	M. POINT
VHS-C Alignment Tape (VFMS0004H6C) Monoscope	07, 0B	
MEASURE EQ.	SPEC.	
EVF Monitor	Black and White EVF Monitor	

Adjustment Procedure :
1) Digital adjustment control tool setting.
COLOR BAR : OFF
MENORY : EEPROM
AREA : EXTEND
MODE : WRITE

2) Playback VHS-C Alignment tape. (Monoscope)

3) Adjust data at address 07 and 0B by DATA INC and DEC buttons so that the EVF monitor becomes black and white.

MONOCHROME EVF PORTION (Model : A)

COMPARISON CHART
OF MODELS & MARKS

MODEL No.	MARK
PV-L657	A
PV-L757	B

PREPARATION

The following adjustments are for the monochrome electronic viewfinder.

(1) Connect the connector P3 to P902.
(2) The camera and VCR circuit must be completely aligned before viewfinder adjustment are mode.

1. VERTICAL SIZE ADJUSTMENT

Purpose : Set EVF vertical standard picture size.

Symptom of Misadjustment :
The EVF vertical picture size is abnormal.

INPUT	ADJUSTMENT	MEASURE POINT
Gray Scale Chart	VR901	
MEASURE EQ.	SPEC.	
Viewfinder	Best Vertical size	

Note : VR901 : EVF C.B.A.

Adjustment Procedure :
1) Aim the camera at the gray scale chart.

2) Adjust the VERTICAL SIZE CONTROL (VR901) so that the vertical size becomes correct.

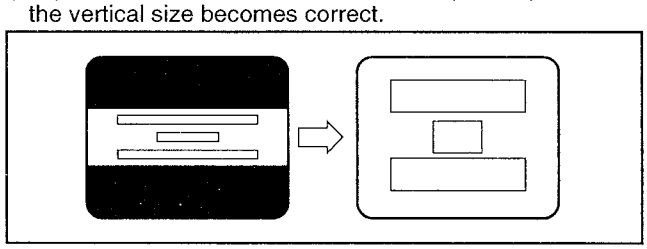


Fig. E9

2. CENTERING ADJUSTMENT

Purpose : Optimize EVF picture position.

Symptom of Misadjustment : EVF picture off center.

INPUT	ADJUSTMENT	MEASURE POINT
Gray Scale Chart	Deflection Yoke Centering Magnet	
MEASURE EQ.	SPEC.	
Viewfinder	Center the Picture	

Note : VR903 : EVF C.B.A.

Adjustment Procedure :
1) Aim the camera at the gray scale chart

2) Adjust the deflection yoke centering magnet by turning them so that the picture in the Viewfinder is centered.

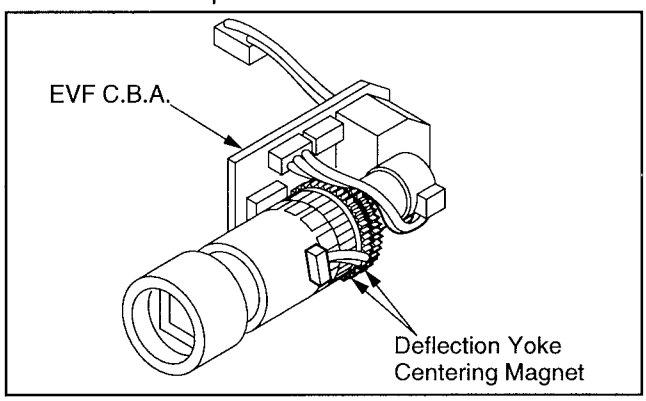


Fig. E10

3. BRIGHTNESS ADJUSTMENT

Purpose : EVF brightness level adjustment.

Symptom of Misadjustment :
The EVF picture is too white or black.

INPUT	ADJUSTMENT	MEASURE POINT
Color Bar Chart	VR906	
MEASURE EQ.	SPEC.	
Viewfinder	Natural Gradation	

Note : VR906 : EVF C.B.A.

Adjustment Procedure :
1) Aim the camera at the color bar chart.

2) Adjust the BRIGHTNESS CONTROL (VR906) so that the brightness in the Viewfinder becomes natural gradation.

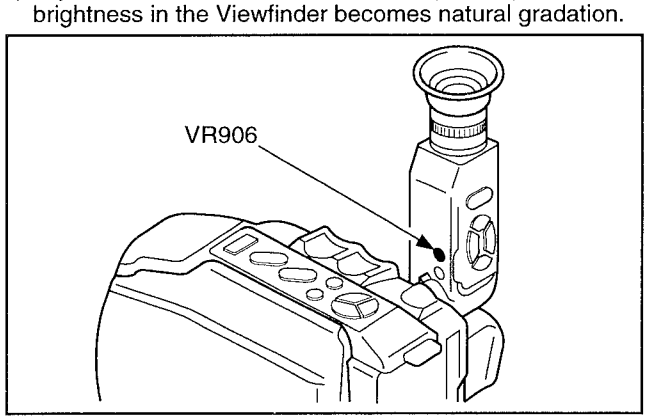


Fig. E11

4. FOCUS ADJUSTMENT

Purpose : EVF focus adjustment.

Symptom of Misadjustment : The EVF is out of focus.

INPUT	ADJUSTMENT	MEASURE POINT
Gray Scale Chart	VR903	
MEASURE EQ.	SPEC.	
Viewfinder	Best Resolution	

Note : VR903 : EVF C.B.A.

Adjustment Procedure :
1) Aim the camera at the gray scale chart.

2) Adjust the FOCUS CONTROL (VR903) for Best Resolution in the viewfinder.

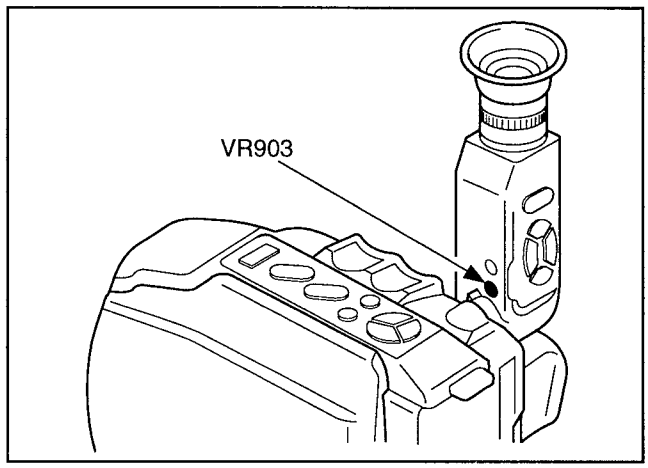


Fig. E12

LCD MONITOR PORTION

PREPARATION

(1) Connect the connector P2 to P9001.
(2) Set the BRIGHTNESS CONTROL (VR9011) to the click position as shown in Fig. L1.
(3) Before starting LCD adjustments, turn the power on and confirm that the LCD back light is on.

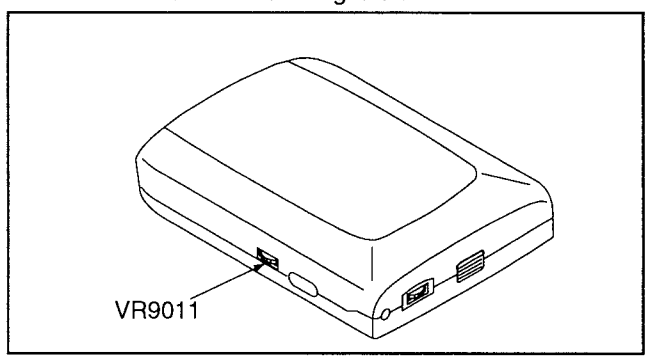


Fig. L1

1. CENTERING ADJUSTMENT

Purpose : Optimize LCD picture position.

Symptom of Misadjustment : LCD picture off center.

INPUT	ADJUSTMENT	M. POINT
VHS-C Alignment Tape (VFMS0004H6C) Monoscope	VR9010	
MEASURE EQ.	SPEC.	
LCD Monitor	Center the Picture	

Note : VR9010 : LCD C.B.A.

Adjustment Procedure :
1) Playback the VHS-C alignment tape. (Monoscope)

2) Adjust the CENTERING CONTROL (VR9010) so that the picture in the LCD Monitor is centered.

2. PEDESTAL LEVEL ADJUSTMENT

Purpose : Set the black signal level.

Symptom of Misadjustment :
The picture is too bright or too dark.

INPUT	ADJUSTMENT	MEASURE POINT
Gray Scale Chart	VR9003	TP9003
MEASURE EQ.	SPEC.	
Oscilloscope	3.5V ± 0.05V	

Note : TP9003, VR9003 : LCD C.B.A.

Adjustment Procedure :
1) Set VR9011 to click position.

2) Connect the oscilloscope to TP9003.

3) Adjust the PEDESTAL LEVEL CONTROL (VR9003) so that the signal level becomes 3.5V ± 0.05V.

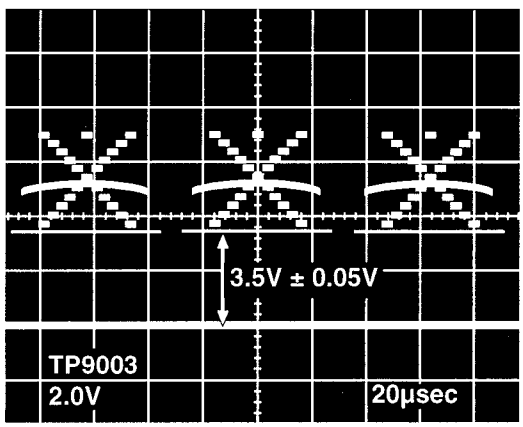


Fig. L2

3. CONTRAST ADJUSTMENT

Purpose : Contrast adjustment.

Symptom of Misadjustment :
The LCD picture becomes blackish or whitish.

INPUT	ADJUSTMENT	MEASURE POINT
Gray Scale Chart	VR9004	TP9003
MEASURE EQ.	SPEC.	
Oscilloscope	0.55V ± 0.05V	

Note : TP9003, VR9004 : LCD C.B.A.

Adjustment Procedure :
1) Aim the camera at the gray scale chart.

2) Connect the oscilloscope to TP9003.

3) Adjust the CONTRAST CONTROL (VR9004) so that the signal level (A) becomes 0.55V ± 0.05V.

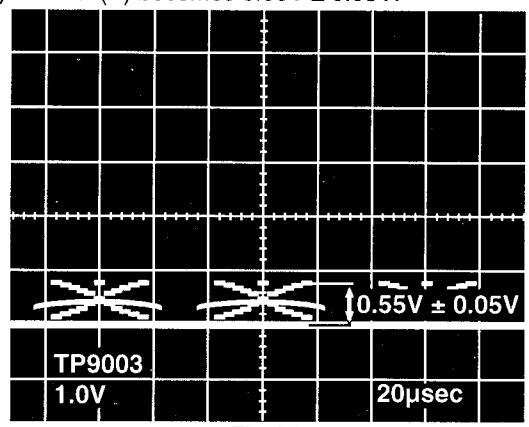


Fig. L3

4. COLOR GAIN ADJUSTMENT

Purpose : Color gain adjustment.

Symptom of Misadjustment : No color.

INPUT	ADJUSTMENT	M. POINT
VHS-C Alignment Tape (VFMS0004H6C) Color Bar	VR9005	TP9002
MEASURE EQ.	SPEC.	
Oscilloscope	A = 0.1V ± 0.05V	

Note : TP9002, VR9005 : LCD C.B.A.

Adjustment Procedure :
1) Connect the oscilloscope TP9002.

2) Playback the VHS-C alignment tape. (Color bar)

3) Adjust the COLOR GAIN CONTROL (VR9005) so that the signal level becomes A = 0.1V ± 0.05V.

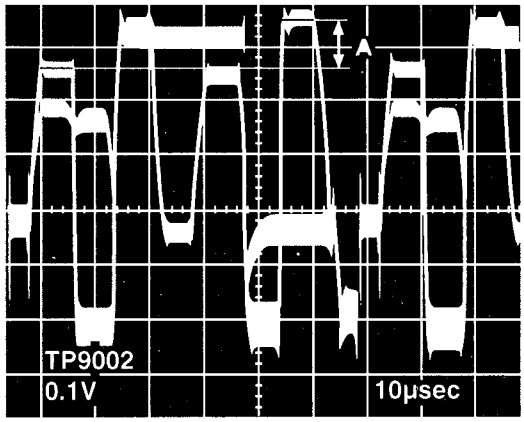


Fig. L4

5. TINT ADJUSTMENT

Purpose : Color Phase adjustment.

Symptom of Misadjustment : Miss-color.

INPUT	ADJUSTMENT	M. POINT
VHS-C Alignment Tape (VFMS0004H6C) Color Bar	VR9006	TP9002
MEASURE EQ.	SPEC.	
Oscilloscope	A = 0.0V ± 0.05V	

Note : TP9002, VR9006 : LCD C.B.A.

Adjustment Procedure :
1) Connect the oscilloscope TP9002.

2) Playback the VHS-C alignment tape. (Color bar)

3) Adjust the TINT CONTROL (VR9006) so that the signal level becomes A = 0.0V ± 0.05V.

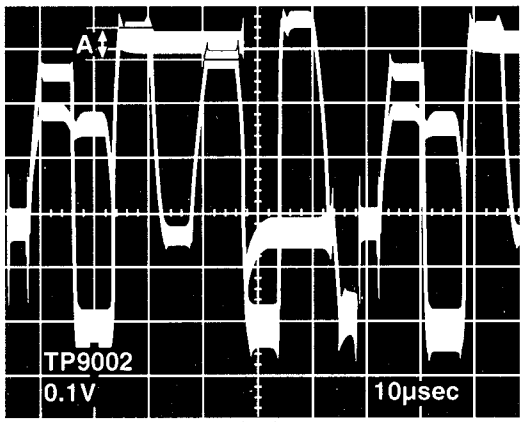


Fig. L5

6. CLAMP LEVEL ADJUSTMENT

Purpose : To set optimum luminance level.

Symptom of Misadjustment : The picture becomes dark or bright.

INPUT	ADJUSTMENT	MEASURE POINT
Gray Scale Chart	VR9007 (R) VR9008 (B)	TP9004 (G) TP9005 (R) TP9006 (B)
MEASURE EQ.	SPEC.	
Oscilloscope	See below	

Note : TP9004, TP9005, TP9006, VR9007, VR9008 : LCD C.B.A.

Adjustment Procedure :
1) Aim the camera at the gray scale chart.

2) Connect the oscilloscope TP9004.

3) Measure the waveform of GREEN CLAMP LEVEL.

4) Connect the oscilloscope TP9005.

5) Adjust the RED CLAMP LEVEL CONTROL (VR9007) so that the RED CLAMP LEVEL becomes same as GREEN CLAMP LEVEL.

6) Connect the oscilloscope TP9006.

7) Adjust the BLUE CLAMP LEVEL CONTROL (VR9008) so that the BLUE CLAMP LEVEL becomes same as GREEN CLAMP LEVEL.

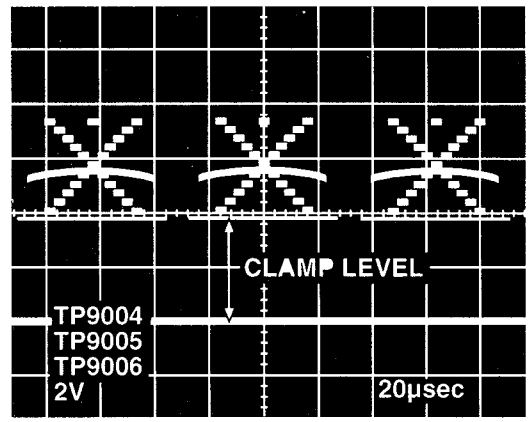


Fig. L6

7. LUMINANCE LEVEL ADJUSTMENT

Purpose : Set the optimum luminance level.

Symptom of Misadjustment :
The picture is too dark or too bright.

INPUT	ADJUSTMENT	MEASURE POINT
Gray Scale Chart	VR9012	
MEASURE EQ.	SPEC.	
LCD Monitor	Refer to Fig. L7	

Note : VR9012 : LCD C.B.A.
Warm up the camcorder more than 2 minutes before adjustment.

Adjustment Procedure :
1) Aim the camera at the gray scale chart.

2) Adjust the LUMINANCE LEVEL CONTROL (VR9012) so that the second position of the gray scale chart becomes the same brightness of the first position of the gray scale chart as shown in Fig. L6 below.

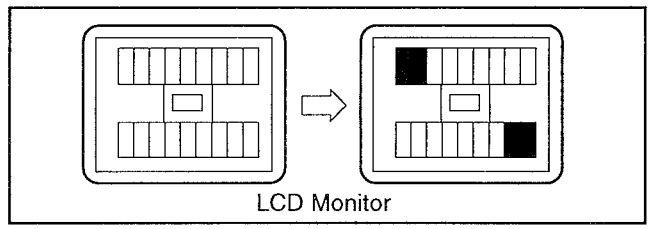


Fig. L7

8. WHITE BALANCE ADJUSTMENT

Purpose : Set standard white level for each color temperature.

Symptom of Misadjustment :
White becomes bluish or reddish.

INPUT	ADJUSTMENT	M. POINT
Gray Scale Chart	VR9001,VR9002	
MEASURE EQ.	SPEC.	
LCD Monitor	Black and White LCD Monitor	

Note : VR9001, VR9002 : LCD C.B.A.
Warm up the camcorder more than 2 minutes before adjustment.

Adjustment Procedure :
1) Aim the camera at the gray scale chart.

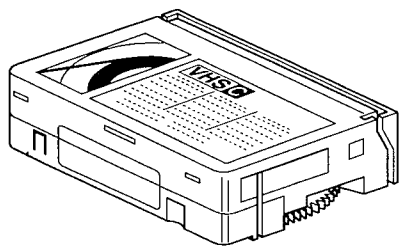
2) Adjust the RED GAIN CONTROL (VR9002) and BLUE GAIN CONTROL (VR9001) so that the LCD monitor becomes black and white.

ELECTRICAL ADJUSTMENT FOR VCR SECTION

1. TEST EQUIPMENT AND TOOLS

The following equipment is required for adjustment of the VCR section.

1. Dual-Trace Oscilloscope
   Voltage Range : 0.001~50V / Div.
   Frequency Range : DC~50MHz
   Probe : 10 : 1 or 1 : 1
2. Frequency Counter
3. VHS-C Alignment Tape (VFMS0004H6C)
4. Digital Adjustment Control Tool (VFKW0083)
5. TP Board Kit (VFKW0123)
6. Audio Video Cable (VJAW0032)



Start Counter Reading	0	0056±2.5	0340±37	0650±62
Video	Blank	Monoscope	Color Bars	Multi-Burst
Audio	Blank	6kHz (MONO)	3kHz (STEREO)	1kHz (MONO)

Fig. V1

2. HOW TO READ THE ADJUSTMENT PROCEDURES

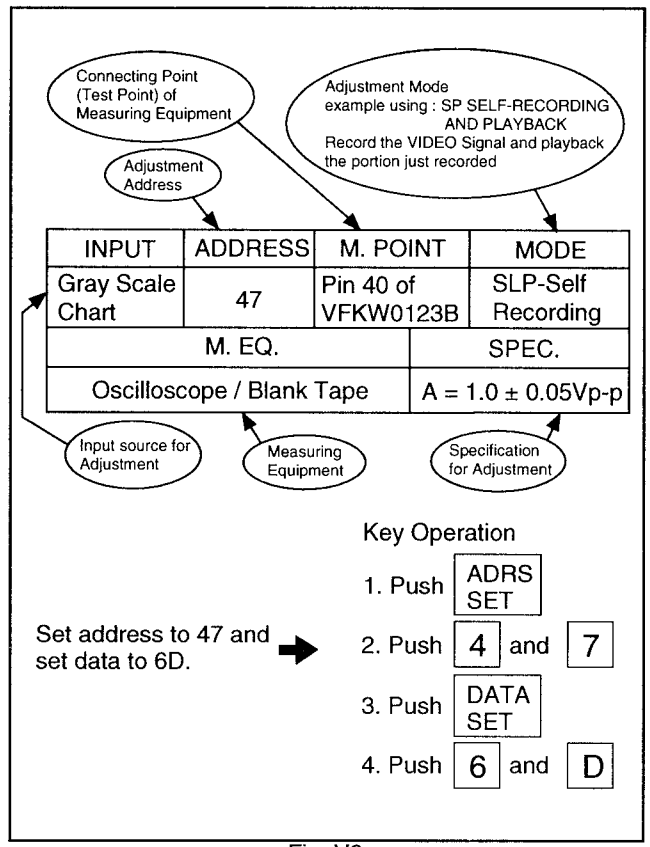


Fig. V2

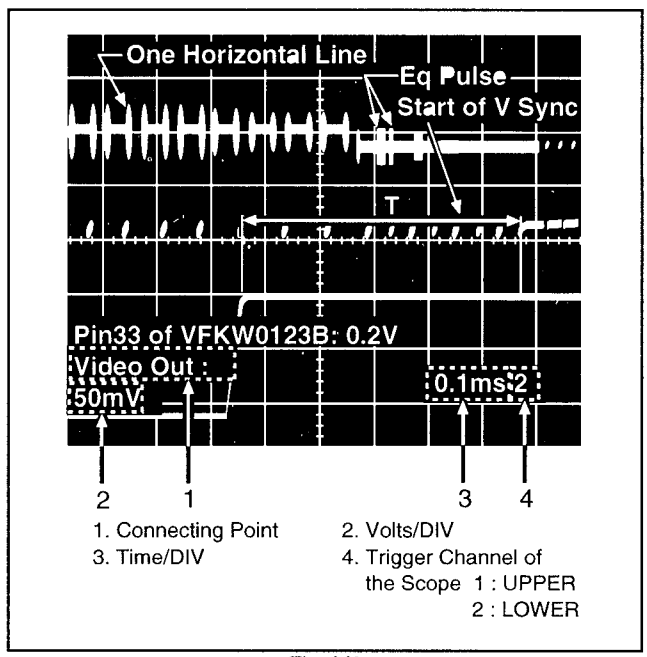


Fig. V3

1. PLAYBACK VIDEO LEVEL ADJUSTMENT

Purpose : To set optimum luminance level.

Symptom of Misadjustment :
Luminance level Interchangeability is inadequate.

INPUT	ADDRESS	MEASURE POINT	MODE
	70	Video output jack (75Ω Terminated)	SP-Playback

MEASURE EQ.	SPEC.
Oscilloscope VHS-C alignment tape / VFMS0004H6C (Color bars)	A = 1.0 ± 0.025Vp-p

Adjustment Procedure :
1) Terminate the video output jack with 75Ω resistor and connect oscilloscope as shown in Fig. V5.

2) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : WRITE

3) Set address to 70.

4) Playback the VHS-C alignment tape.(Color bars)

5) Adjust data at address 70 by DATA INC and DEC Buttons so that the voltage A becomes 1.0 ± 0.025Vp-p.

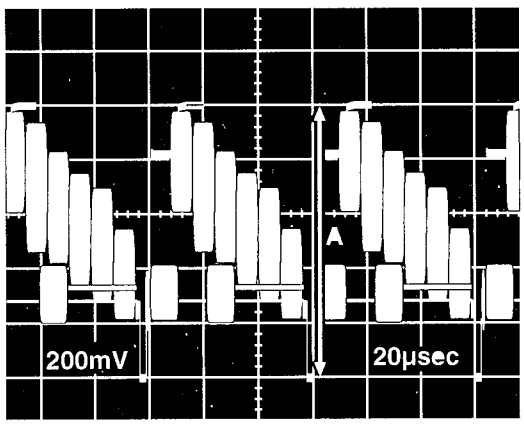


Fig. V4

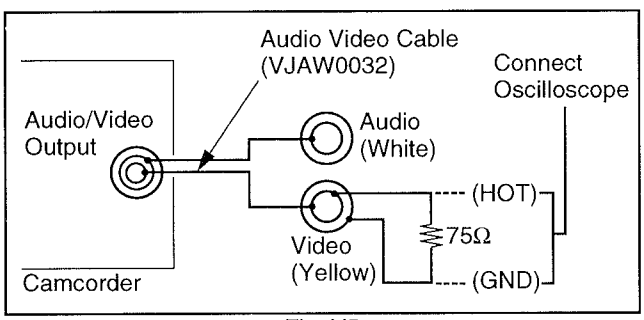


Fig. V5

2. SYNC TIP FREQUENCY ADJUSTMENT

Purpose : To maintain the recording interchangeability.

Symptom of Misadjustment :
Dark or white tearing in playback mode.

INPUT	ADDRESS	MEASURE POINT	MODE
	79	Pin 40 of VFKW0123B	SLP-Self recording

MEASURE EQ.	SPEC.
Frequency counter / Blank tape	3.5 ± 0.03MHz

Note : Pin 40 of VFKW0123B : On TP adjustment PCB

Adjustment Procedure :
1) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : WRITE

2) Set address to 94 and set data to 8A.

3) Set address to 79.

4) Connect frequency counter to pin 40 of TP adjustment PCB / VFKW0123B

5) Adjust data at address 79 by DATA INC and DEC Buttons so that the frequency becomes 3.5 ± 0.03MHz.
1 data change : 0.02MHz

6) Set address to 94 and set data to 0A.

3. DEVIATION ADJUSTMENT

Purpose : To maintain the recording interchangeability by adjusting the deviation.

Symptom of Misadjustment :
Noisy or dark in the playback picture.

INPUT	ADDRESS	MEASURE POINT	MODE
Gray scale chart	77	Pin 40 of VFKW0123B	SLP-Self recording

MEASURE EQ.	SPEC.
Oscilloscope / Blank tape	A = 1.0 ± 0.025Vp-p

Note : Pin 40 of VFKW0123B : On TP adjustment PCB
Confirm following adjustment items before this adjustment.
1. PLAYBACK VIDEO LEVEL ADJUSTMENT
2. SYNC LEVEL ADJUSTMENT

Adjustment Procedure :
1) Connect oscilloscope to pin 40 of TP adjustment PCB/ VFKW0123B.

2) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : WRITE

3) Set address to 77.

4) Record gray scale chart in SLP-camera mode.

5) Playback the SLP self recorded tape and confirm that voltage A is 1 ± 0.025Vp-p. (Refer to Fig V6.)

6) If not, adjust at address 77 by DATA INC and DEC buttons within a data range of 40 ~ 7F so that the voltage A in the playback mode becomes 1.0 ± 0.05Vp-p by repeating steps 4) ~ 5).
1 data up : + 8mV, 1 data down : -8mV
Then, go back to step 3) and confirm the result.

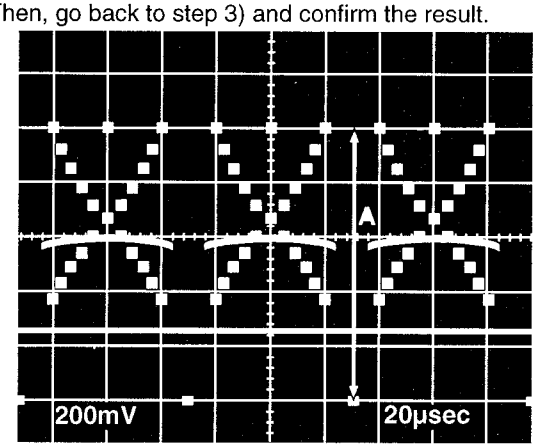


Fig. V6

4 REC CURRENT ADJUSTMENT

4-1. REC CHROMA LEVEL ADJUSTMENT

Purpose : Set the optimum recording chroma level.

Symptom of Misadjustment :
If the recording chroma level is too high, beats may be seen in the picture. If the level is too low, the color may be degraded.

INPUT	ADDRESS	MEASURE POINT	MODE
Fade	6C, 6B	Pins 40 and 39 of VFKW0123B	SLP-Self recording

MEASURE EQ.	SPEC.
Oscilloscope (Add mode) / Blank tape	A-B = 80 ± 3Vp-p (BURST)

Note : Pins 40 and 39 of VFKW0123B : On TP adjustment PCB
After this adjustment 4-2. REC LUMINANCE LEVEL ADJUSTMENT should be adjusted.

Adjustment Procedure:
1) Fade on.
1. Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : NORMAL
MODE : WRITE

2. Set address to 7C and set data to A0.

3. Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : Int. RAM
AREA : NORMAL
MODE : WRITE

4. Set address to 1C and set data to 00.

5. Set address to B0 and set data to 00.

6. Set address to B1 and set data to 00.

2) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : WRITE

3) Set address to 94 and set data to 4A.

4) Connect oscilloscope at pins 40 and 39 of TP adjustment PCB / VFKW0123B and set oscilloscope polarity at pin 40 of VFKW0123B to negative.
Then , change the oscilloscope mode to Add.

5) Press to REC button.

6) Set address to 6C.

7) Adjust data at address 6C by DATA INC and DEC buttons within a data range of 00 ~ 7F so that the voltage A - B becomes 88 ± 3mVp-p in the playback mode.

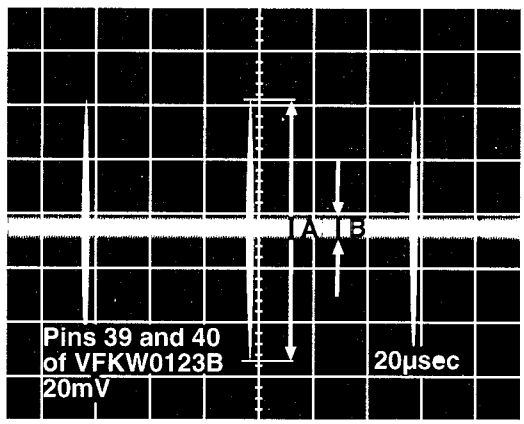


Fig. V7 "Add mode"

8) Write the data of address 6C in the memo box.

MEMO

9) Set address to 6B, then write the data of address 6C into the address 6B.

10) Set address to 94 and set data to 0A.

12) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : NORMAL
MODE : WRITE

13) Set adress to 7C and set data to 21. : Fade out.

4-2. REC LUMINANCE LEVEL ADJUSTMENT

Purpose : Set the optimum recording luminance level.

Symptom of Misadjustment :
If the recording luma level is too high, video may overload.
If the level is too low, the S/N ratio deteriorates.

INPUT	ADDRESS	MEASURE POINT	MODE
Fade	7A, 7B	Pins 40 and 39 of VFKW0123B	SLP-Self recording
MEASURE EQ.		SPEC.	
Oscilloscope (Add mode) / Blank tape		A = 210 ± 12mVp-p	

Note : Pins 40 and 39 of VFKW0123B : On TP adjustment PCB

Adjustment Procedure :
1) Fade on.
   1. Digital adjustment control tool setting.
      COLOR BAR : OFF
      MEMORY : EEPROM
      AREA : NORMAL
      MODE : WRITE

   2. Set address to 7C and set data to A0.

   3. Digital adjustment control tool setting.
      COLOR BAR : OFF
      MEMORY : Int. RAM
      AREA : NORMAL
      MODE : WRITE

   4. Set address to 1C and set data to 00.

   5. Set address to B0 and set data to 00.

   6. Set address to B1 and set data to 00.

2) Connect oscilloscope at pins 40 and 39 of TP adjustment PCB / VFKW0123B and set oscilloscope polarity at pin 40 of VFKW0123B to negative.
   Then , change the oscilloscope mode to Add.

3) Press to REC button.

4) Digital adjustment contrl tool setting.
   COLOR BAR : OFF
   MEMORY : EEPROM
   AREA : EXTEND
   MODE : WRITE

5) Set address to 7B.

6) Adjust data at address 7B by DATA INC and DEC buttons within a data range of 00 ~ 3F so that the voltage A becomes 210 ± 12mVp-p in the playback mode.

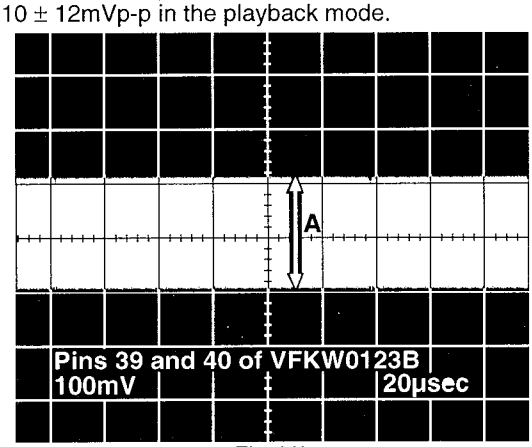


Fig. V8 "Add mode"

7) Write the data of address 7B in the memo box.

MEMO

8) Set address to 7A, then write the data of address 7B into the address 7A.

9) Digital adjustment control tool setting.
   COLOR BAR : OFF
   MEMORY : EEPROM
   AREA : NORMAL
   MODE : WRITE

10) Set address to 7C and set data to 21. : Fade out.

5. COMB FILTER ADJUSTMENT

Purpose :
Optimize the crosstalk interference compensation in the SLP mode.

Symptom of Misadjustment :
If the 3.58MHz signal is too high, a vertical color beat appears in SLP playback mode.

INPUT	ADDRESS	M. POINT	MODE
Color bar chart (W/White window)	73, 74, 75	Video out (Monitor)	SLP-Playback
MEASURE EQ.		SPEC.	
Monitor TV / Blank tape		Refer to Fig. V9-2	

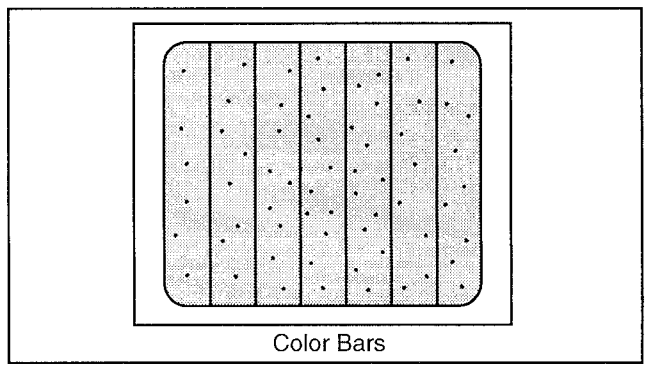
Adjustment Procedure :
1) Digital adjustment control tool setting.
   COLOR BAR : OFF
   MEMORY : EEPROM
   AREA : EXTEND
   MODE : WRITE

2) Set address to 75.

3) Adjust data at address 75 by DATA INC and DEC buttons in an interval of more than 00 ~ 1F so that optimize the monitor TV picture position.

4) Set address to 73.

5) Adjust data at address 73 by DATA INC and DEC buttons within a data range of 00 ~ 7F so that optimize the monitor TV picture position.



Color Bars

Fig. V9-1

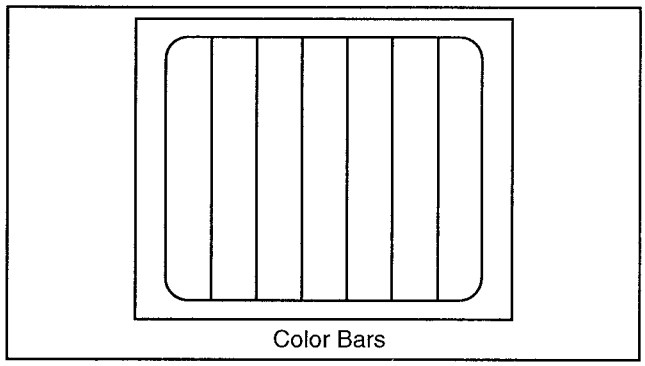


Fig. V9-2

6) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : READ

7) Set address to 75.

8) Read the data of address 75 and write the data in the memo box.

MEMO

9) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : WRITE

10) Set address to 74, then write the data of address 75 into the address 74.

6. YNR ADJUSTMENT

Purpose : To improve the playback luminance S/N.

Symptom of Misadjustment :
Playback interchangeability is inadequate.

INPUT	ADDRESS	MEASURE POINT	MODE
Color bar	71, 7E	Pin 31 of VFKW0123B	SP-Playback

MEASURE EQ.	SPEC.
Oscilloscope VHS-C alignment tape / VFMS0004H6C (Color bars)	Minimum signal level

Note : Pin 31 of VFKW0123B : On TP adjustment PCB
Confirm following adjustment item before this adjustment.
1. PLAYBACK VIDEO LEVEL ADJUSTMENT

Adjustment Procedure :
1) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : WRITE

2) Connect the oscilloscope to pin 31 of TP adjustment PCB / VFKW0123B.

3) Set address to 71.

4) Adjust data at address 71 by DATA INC and DEC buttons within a data range of 00 ~ FF so that the signal level at pin 31 of VFKW0123B becomes its minimum.

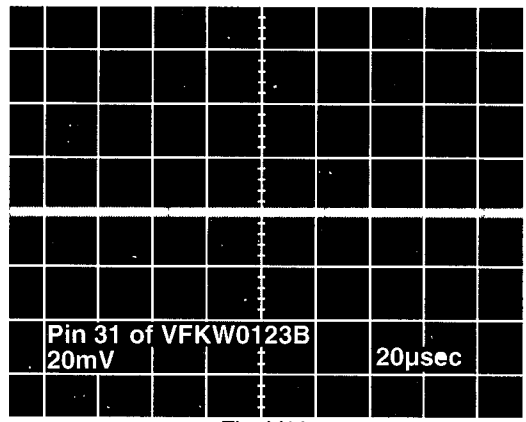


Fig. V10

5) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : READ

6) Set address to 71.

7) Read the data of address 71 and write the data in the memo box.

MEMO

8) Digital adjustment control tool setting.
COLOR BAR : OFF
MEMORY : EEPROM
AREA : EXTEND
MODE : WRITE

9) Set address to 7E, then write the data of address 71 into the address 7E.

7. HEAD SWITCHING POSITION ADJUSTMENT (PG SHIFTER)

Purpose :
Determine the head switching point during playback.

Symptom of Misadjustment :
May cause head switching noise and / or vertical jitter in the picture.

INPUT	ADDRESS	MEASURE POINT	MODE
Color bars	68	Pin 33 of VFKW0123B Video output jack	SP-Playback

MEASURE EQ.	SPEC.
Oscilloscope VHS-C alignment tape / VFMS0004H6C (Color bars)	T = 6.5 ± 0.5H (Approx. 0.4msec)

Note : Pin 33 of VFKW0123B : On TP adjustment PCB

Adjustment Procedure :
1) Terminate the video output jack with 75Ω resistor and connect oscilloscope as shown in Fig. V5.

2) Digital adjustment control tool setting.
   COLOR BAR : OFF
   MEMORY : EEPROM
   AREA : EXTEND
   MODE : WRITE

3) Set address to 68.

4) Adjust data at address 68 by DATA INC and DEC buttons so that the T becomes 6.5 ± 0.5H (approx. 0.4msec).

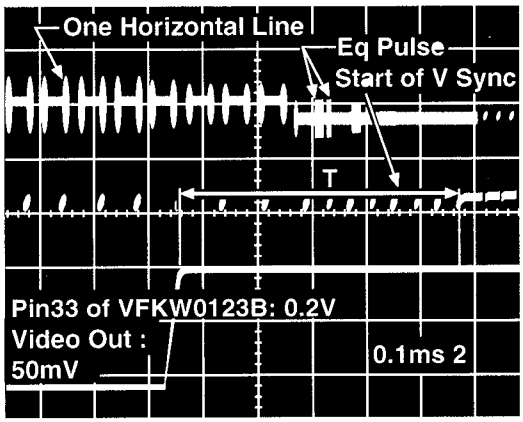
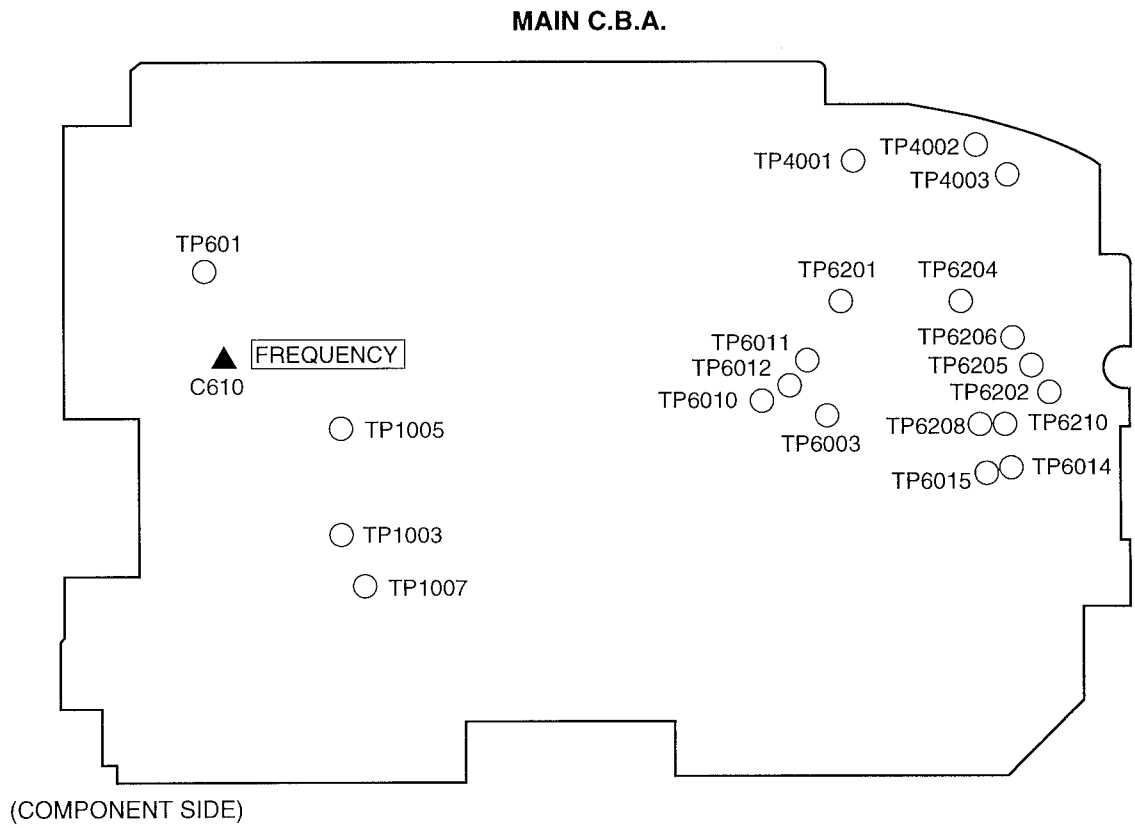


Fig. V11

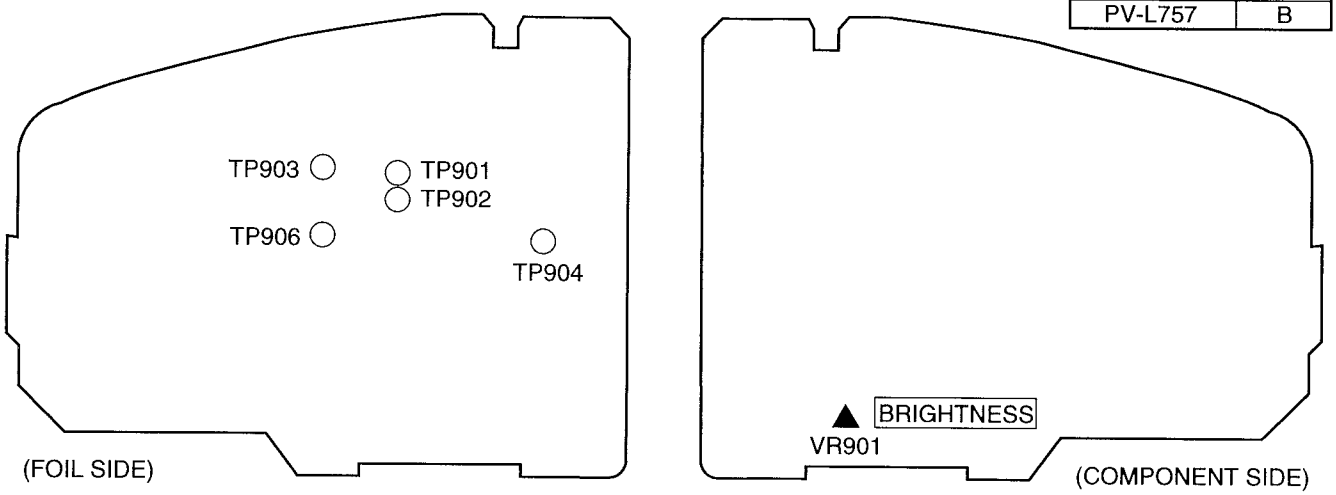
C. LOCATION OF TEST POINTS AND ADJUSTMENT POINTS



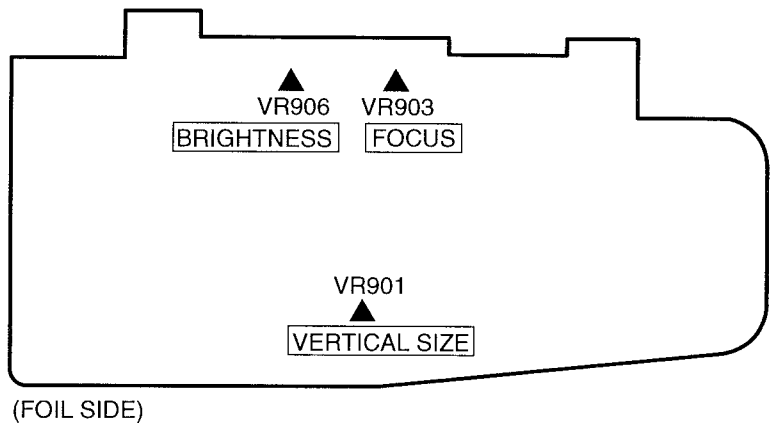
COMPARISON CHART OF MODELS & MARKS

MODEL No.	MARK
PV-L657	A
PV-L757	B

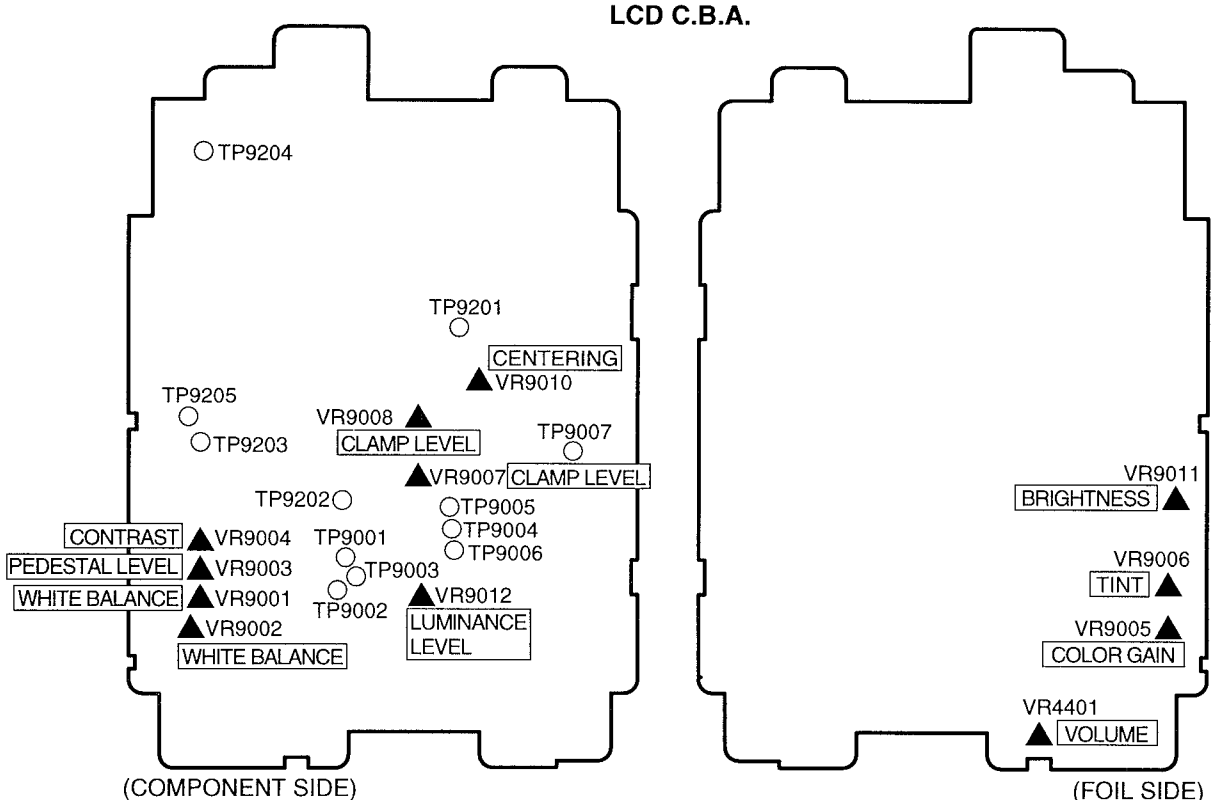
COLOR EVF A C.B.A. (Model : B)



EVF C.B.A. (Model : A)



LCD C.B.A.



Ⅳ. SCHEMATIC DIAGRAM
NOTICE ON THE SCHEMATIC DIAGRAMS

1. NOTE: MARK "■" IS LEADLESS (NO CHIP) COMPONENT

2. NOTE:
   1. DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
   2. MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS. ONLY USE ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

3. NOTE: TEST POINT INFORMATION
   ⊘ : USED FOR THE INDICATION OF TEST POINT WITHOUT TEST PIN.

4 NOTE: UNLESS OTHERWISE SPECIFIED. WATTAGE OF RESISTORS ARE 1/16W.

COLOR EVF SCHEMATIC DIAGRAM (MODEL:B)

VIDEO SIGNAL PATH

IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED BY THE ⚠ SYMBOL HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-L657 PV-L757	A B

IC902 SIGNAL N

PIN No.	I/O	SIGN
IC902		
1	I	CS(L)
2	—	GND
3	I	SERIAL DAT
4	I	SERIAL CL
5	—	VCC

IC903 SIGNAL N

PIN No.	I/O	SIGN
IC903		
1	O	RESET SIGN
2	—	VDD
3	—	GND

COLOR EVF A C.B.A.

VEPW1587C1

FP902 — TO VCR OPERATION UNIT
1 KYE DATA 2
3 UNREG GND
4 UNREG GND
6 EVF +4.5V

P901 — TO MAIN C.B.A.
1 EVF OUT P3-1
4 EVF +4.5V P3-4
5 EVF GND P3-5
6 KEY DATA 2 P3-6
7 R-Y P3-7
8 B-Y P3-8
9 EVF UNREG GND P3-9
10 EVF +4.5V P3-10
11 EVF +18V P3-11
12 EVF SERIAL DATA P3-12
13 EVF CLOCK P3-13
14 EVF IC STROBE(H) P3-14
15 EVF EEPROM CS(H) P3-15

IC903 S80739SND3T1 (RESET)
IC902 S2900A-7301 (EEPROM)
IC901 AN2522FHPK VIDEO SIGNAL PROCESS LCD PANEL INDICATION CONTROL
Q905 2SB709A (REGULATOR)
Q904 XN1501 (POWER CONTROL)
Q907 2SB1218A (BUFFER)
Q902 2SD1819A (SWITCHING)
VR901 20K BRIGHTNESS

COLOR EVF B C.B.A.

VEPW1543A1

L901 ELL04T304R
T901 ETJ09K8AM
Q901 2SK1299STL (SWITCHING)
B902: 1 UNREG GND; 2 BACK LIGHT +4.5V; 3 UNREG GND; 4 BACK LIGHT +4.5V; 5 BLP
B901

LCD PANEL UNIT

FP901: 1 VCP; 2 VCP; 3 V DATA; 4 VCP 1; 5 VCP 2; 6 VCP 3; 7 VCP 4; 8 VCP 5; 9 VCP 6; 10 VCP 7; 11 VCP 8; 12 H DATA; 13 VDD H; 14 VSS H; 15 VIDEO R OUT; 16 VIDEO B OUT; 17 VIDEO G OUT; 18 LCCOM; 19 VSS Y; 20 VDD Y

Y SHIFT REGISTER
BUFFER
PIXEL MATRIX
VIDEO
X SHIFT REGIS

IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED BY THE ⚠ SYMBOL HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-L657	A
PV-L757	B

IC902 SIGNAL NAME

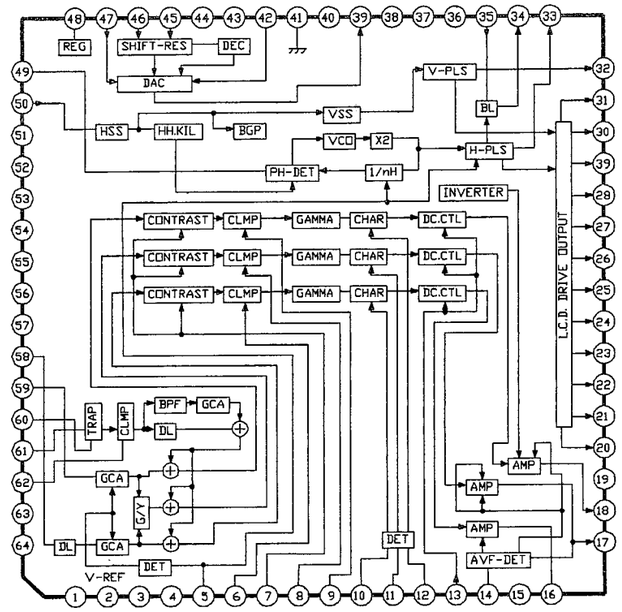
PIN No.	I/O	SIGNAL NAME
IC902		
1	I	CS(L)
2	—	GND
3	I	SERIAL DATA
4	I	SERIAL CLOCK
5	—	VCC

IC903 SIGNAL NAME

PIN No.	I/O	SIGNAL NAME
IC903		
1	O	RESET SIGNAL OUT
2	—	VDD
3	—	GND

IC BLOCK DIAGRAM

IC901



VOLTAGE CHART

MODE PIN No.	CAMERA	MODE PIN No.	CAMERA	MODE PIN No.	CAMERA
IC901		46	4.4	Q905	
1	4.5	47	0	E	17.8
2	4.4	48	3.2	C	14.3
3	0	49	2.2	B	17.2
4	4.5	50	3.0	Q907	
5	0	51	0	E	0
6	0	52	0	C	0
7	1.9	53	0	B	0.6
8	3.5	54	0	TP901	7.2
9	3.5	55	0	TP902	7.1
10	0	56	0	TP903	7.1
11	0	57	0	TP904	1.1
12	0	58	2.7	TP905	3.1
13	2.2	59	2.7		
14	7.2	60	2.4		
15	0	61	2.6		
16	0	62	3.1		
17	7.2	63	3.5		
18	7.1	64	0		
19	14.3	IC902			
20	7.4	1	0		
21	7.4	2	0		
22	7.4	3	4.4		
23	7.4	4	4.4		
24	7.4	5	4.5		
25	7.4	IC903			
26	7.4	1	3.2		
27	7.4	2	4.5		
28	7.4	3	0		
29	3.1	4	0		
30	7.4	5	0		
31	7.4	Q901			
32	4.3	E	0		
33	3.9	C	4.2		
34	0.6	B	1.2		
35	3.8	Q902			
36	0	E	0		
37	0	C	0.1		
38	0	B	0.7		
39	2.3	Q904			
40	0	1	14.3		
41	0	2	17.2		
42	3.2	3	4.5		
43	0	4	4.0		
44	0	5	4.6		
45	4.4				

COLOR EVF	
TRANSISTOR	
Q901	H-4
Q902	F-3
Q904	E-3
Q905	E-4
Q907	D-3
I C	
IC901	C-2
IC902	D-4
IC903	B-4
CONNECTOR	
FP901	G-2
FP902	F-5
B901	G-4
B902	G-4
P901	F-5
TEST POINT	
TP901	E-3
TP902	E-3
TP903	D-2
TP904	F-3
TP905	F-3
ADJUSTMENT	
VR901	B-1

EVF SCHEMATIC DIAGRAM (MODEL:A)

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-L657	A
PV-L757	B

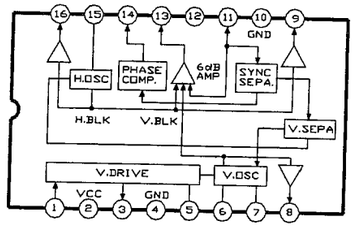
IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED BY THE ⚠ SYMBOL HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

PRODUCT SAFETY NOTICE:

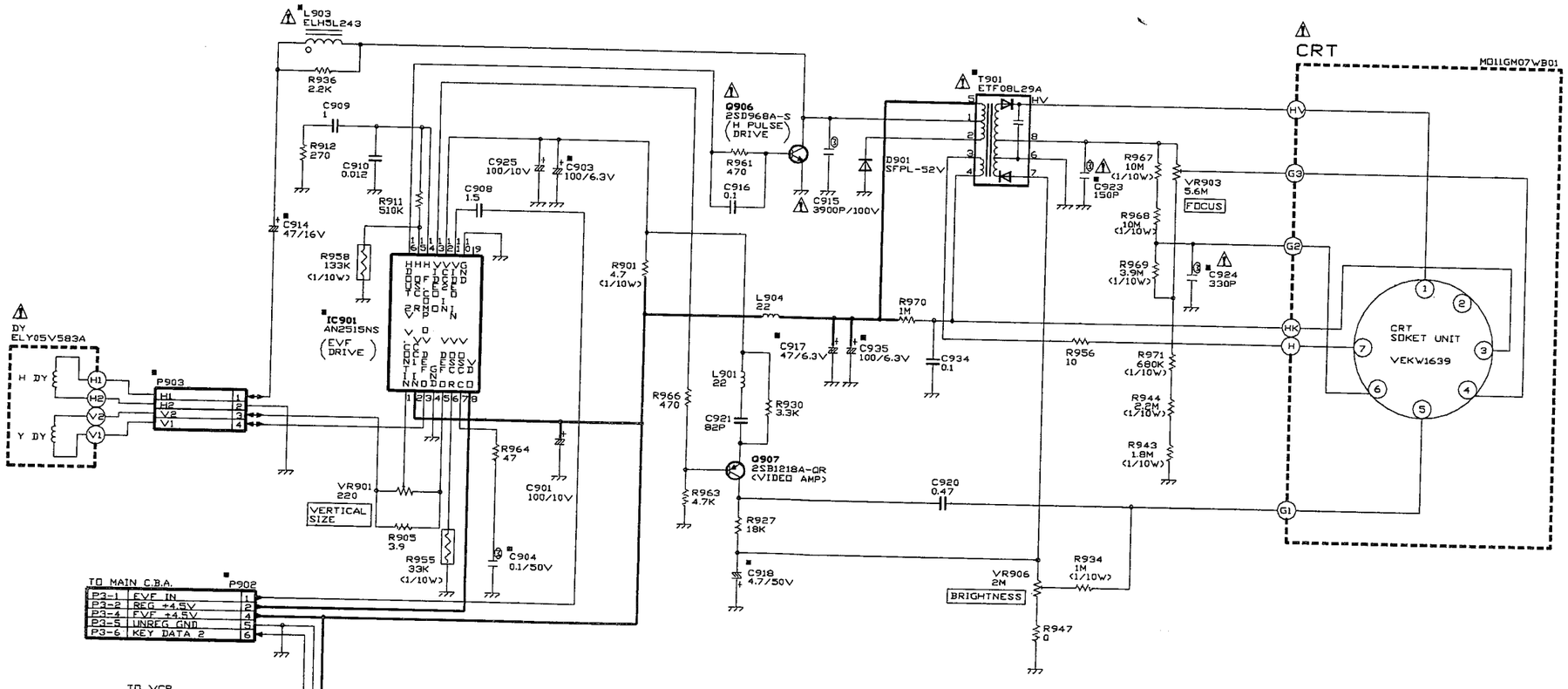
THE ⚠ SYMBOL IN THE EVF SCHEMATIC DIAGRAM, CIRCUIT BOARD LAYOUT, BLOCK DIAGRAM, EXPLODED VIEWS AND REPLACEMENT PARTS LIST INDICATES THAT SPECIAL COMPONENTS HAVE BEEN INCORPORATED FOR PROTECTION FROM X-RADIATION, FIRE AND ELECTRICAL SHOCK HAZARDS. WHEN SERVICING, IT IS ESSENTIAL THAT THEY BE REPLACED ONLY WITH THE MANUFACTURER'S SPECIFIED PARTS.

IC BLOCK DIAGRAM
IC901



VOLTAGE CHART

MODE / PIN No.	CAMERA	MODE / PIN No.	CAMERA
IC901		Q906	
1	2.2	E	0
2	4.8	C	4.5
3	2.2	B	0.5
4	0	Q907	
5	2.2	E	-15.7
6	1.4	C	2.5
7	2.2	B	1.8
8	4.6		
9	4.3		
10	0		
11	2.1		
12	4.6		
13	2.6		
14	2.0		
15	1.9		
16	2.5		



EVF	
TRANSISTOR	
Q906	D-3
Q907	D-2
I C	
IC901	B-3
CONNECTOR	
P903	B-2
P902	B-1
FP901	B-1
CONNECTOR	
VR901	B-2
VR903	F-3
VR906	E-2

TOP CONNECTOR/SIDE L CONNECTOR/ VCR OPERATION SCHEMATIC DIAGRAMS

"FOR REFERENCE ONLY"

IC308 KEY MATRIX CHART

VOLTAGE(V)	0～0.3V	0.55～1.15V	1.4～2.0V	2.55～2.85V
KEY DATA 2 (PIN 82)	EIS (SW812)	DIGITAL ZOOM (SW813)	———	H.S.SHUTTER (SW814)
KEY DATA 3 (PIN 83)	COLOR (SW808)	MODE SELECT (SW809)	BACK LIGHT (SW810)	FADE (SW811)
KEY DATA 4 (PIN 84)	NEGATIVE /POSITIVE (SW806)	SECURITY MODE (SW807)	———	———

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-L657 PV-L757	A B

IC6001 KEY MATRIX CHART 1

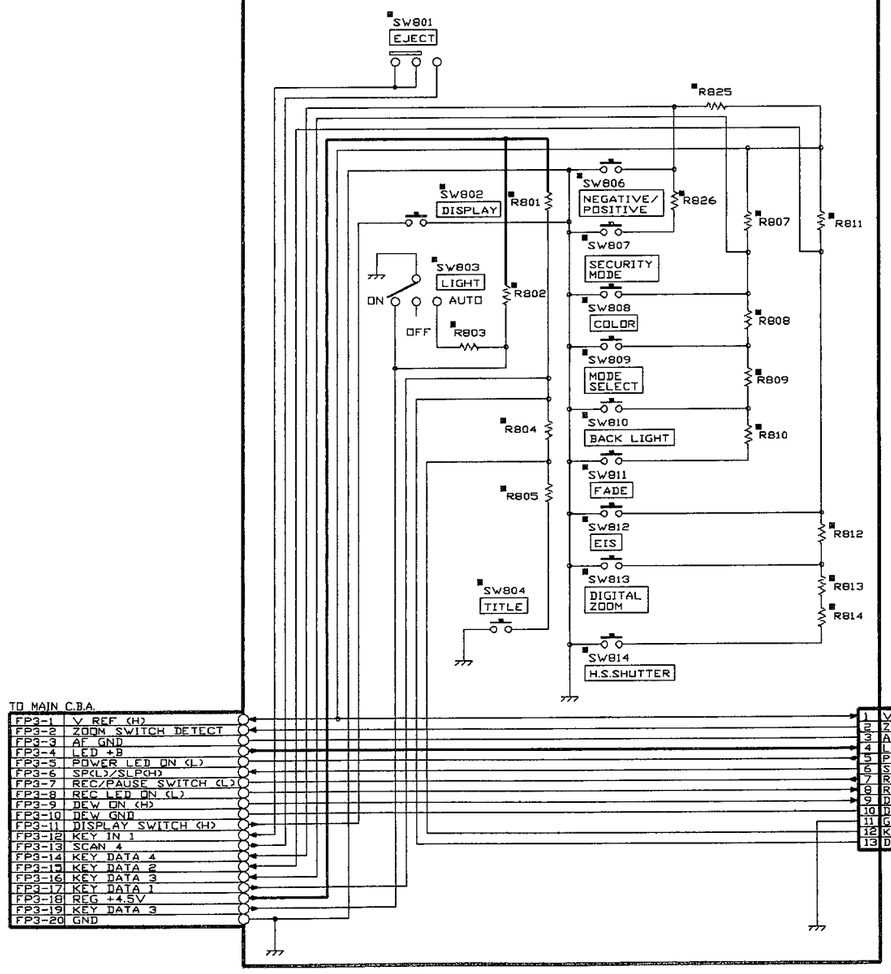
SCAN OUT / KEY IN	SCAN 1 (PIN 93)	SCAN 2 (PIN 92)	SCAN 3 (PIN 91)	SCAN 4 (PIN 90)
KEY IN 1 (PIN 56)	POWER SWITCH			EJECT (SW801)
	OFF	CAMERA	VCR	

IC6001 KEY MATRIX CHART 2

VOLTAGE	0～0.45(V)	0.45～1.35(V)	1.35～2.25(V)	2.25～3.15(V)	3.15～4.05(V)
KEY DATA 1 (PIN 84)	CLOCK DOWN (SW818)	CLOCK SET UP (SW817)	TITLE (SW804)	———	———
KEY DATA 2 (PIN 83)	STOP (SW809)	PLAY (SW810)	FF/CUE (SW811)	REW/REVIEW (SW812)	STILL (SW813)
KEY DATA 3 (PIN 86)	LIGHT (SW803)	AUTO LIGHT (SW803)	———	———	———

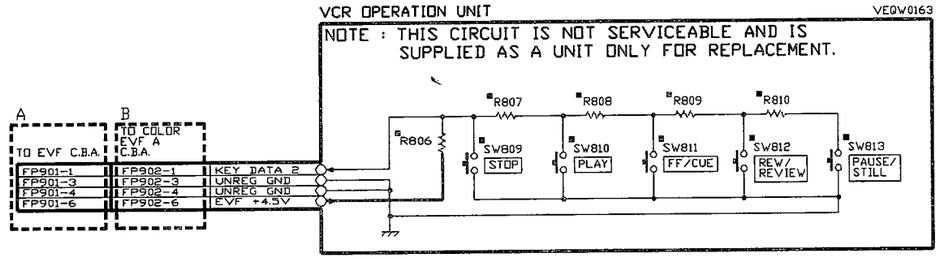
TOP CONNECTOR UNIT VEQW0251

NOTE : THIS CIRCUIT IS NOT SERVICEABLE AND IS SUPPLIED AS A UNIT ONLY FOR REPLACEMENT.



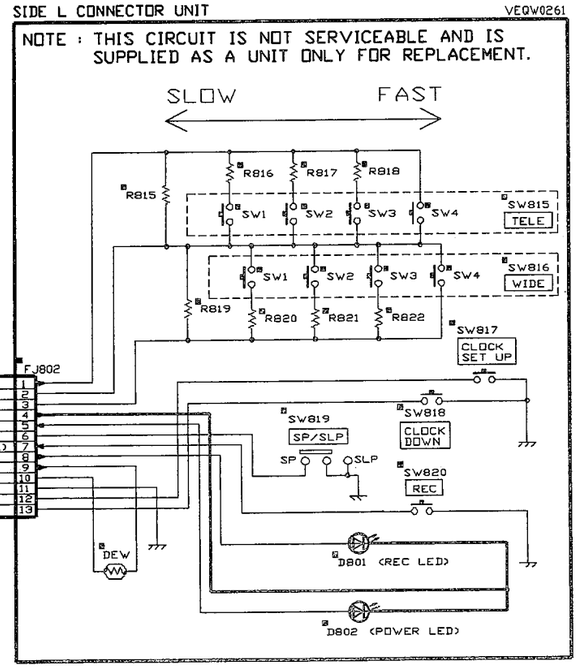
VCR OPERATION UNIT VEQW0163

NOTE : THIS CIRCUIT IS NOT SERVICEABLE AND IS SUPPLIED AS A UNIT ONLY FOR REPLACEMENT.

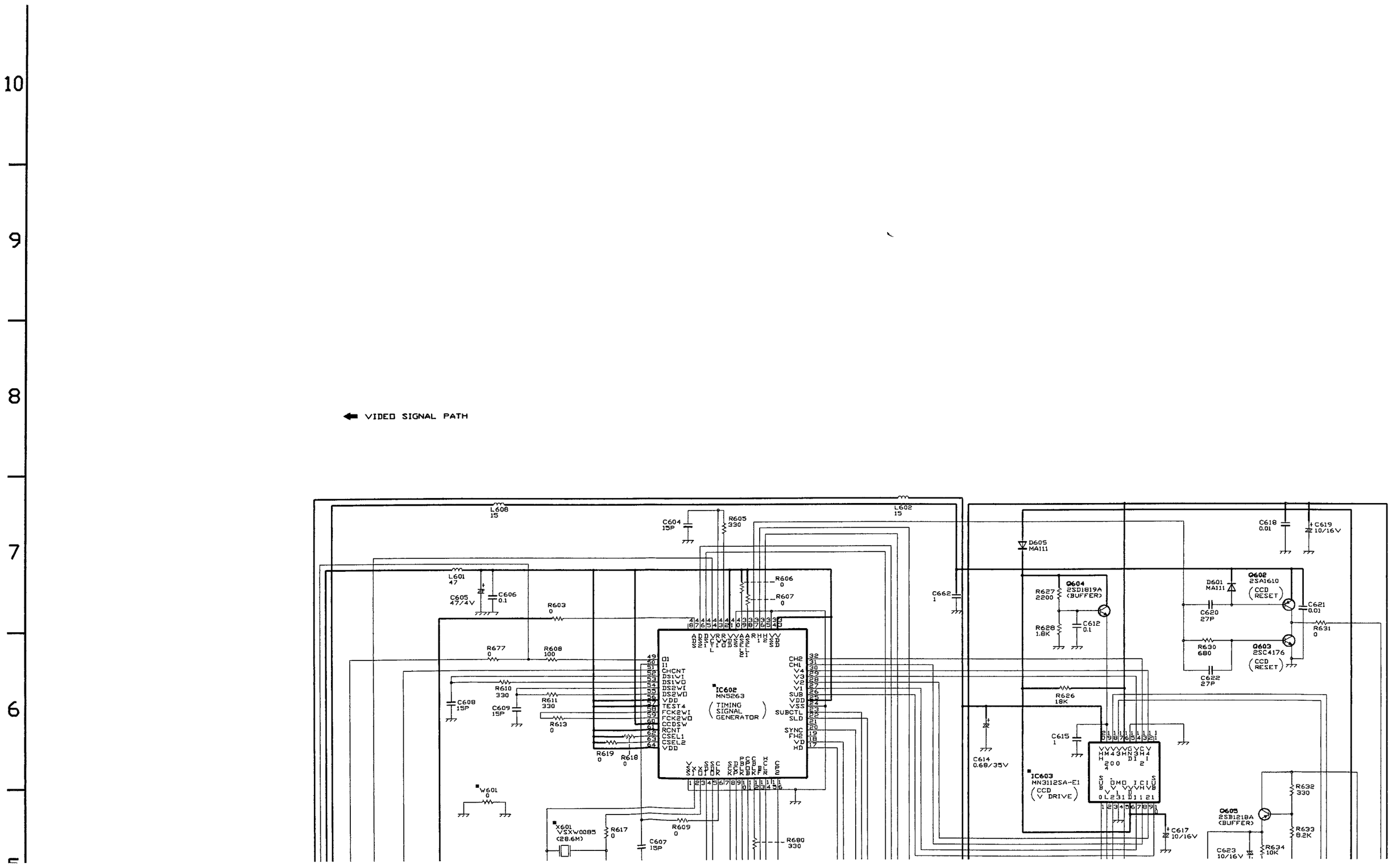


SIDE L CONNECTOR UNIT VEQW0261

NOTE : THIS CIRCUIT IS NOT SERVICEABLE AND IS SUPPLIED AS A UNIT ONLY FOR REPLACEMENT.



MAIN<CCD DRIVE> SCHEMATIC DIAGRAM



VOLTAGE CHART

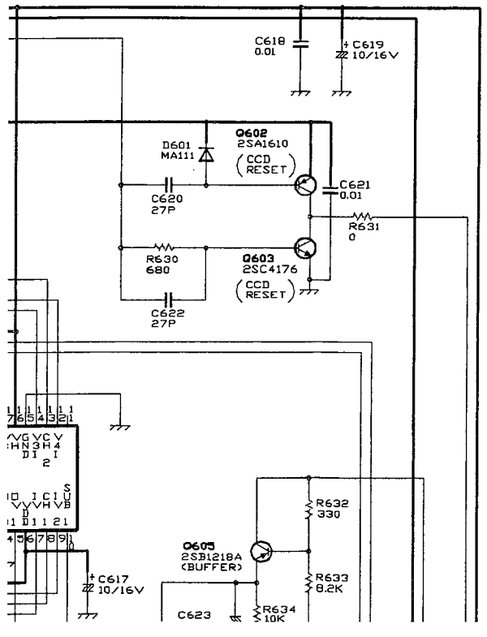
MODE / PIN No.	CAMERA	MODE / PIN No.	CAMERA	MODE / PIN No.	CAMERA	MODE / PIN No.	CAMERA	MODE / PIN No.	CAMERA
IC601		28	0.1	8	3.3	23	0	Q607	
1	5.0	29	3.2	9	0.1	24	0	E	0
2	1.0	30	3.2	10	3.3	25	4.4	C	2.7
3	0	31	3.3	11	0	26	1.8	B	0.3
4	0	32	3.3	12	3.2	27	1.7	Q608	
5	1.5	33	3.3	13	3.3	28	2.9	E	4.8
6	1.1	34	0	14	3.2	29	0	C	2.4
7	2.4	35	1.4	15	0	30	1.7	B	4.6
8	2.7	36	1.6	16	14.8	31	0	Q609	
9	5.0	37	2.6	17	-6.6	32	3.4	E	0
10	6.7	38	3.3	18	-6.6	IC606		C	2.4
11	0	39	3.3	19	1.2	1	1.8	B	0.4
12	-0.2	40	0	20	17.8	2	0	Q610	
13	0.8	41	3.3	IC604		3	2.7	E	1.5
14	-6.8	42	0.9	1	7.4	4	4.9	C	0
15	-6.9	43	1.0	2	0	5	0.6	B	0.9
16	0	44	0	3	3.3	6	0.6	Q611	
IC602		45	0.6	4	0	7	0	E	1.3
1	0	46	0.5	5	14.8	8	1.8	C	4.4
2	1.7	47	1.7	6	14.8	Q601		B	1.9
3	1.6	48	0	7	14.8	E	2.2	Q612	
4	0	49	1.7	8	14.8	C	4.9	E	1.2
5	1.6	50	1.7	IC605		B	2.9	C	3.3
6	1.7	51	0	1	3.2	Q602		B	1.8
7	0	52	1.0	2	1.9	E	10.1	Q613	
8	3.5	53	0.9	3	1.8	C	1.3	E	1.1
9	0	54	1.0	4	1.8	B	0	C	4.4
10	0.5	55	1.0	5	0	Q603		B	1.8
11	0	56	3.3	6	0	E	0	Q614	
12	0.8	57	3.3	7	3.3	C	1.3	E	2.7
13	0.1	58	1.6	8	1.3	B	0.7	C	4.4
14	0.3	59	1.6	9	3.3	Q604		B	3.3
15	0	60	3.3	10	0.3	E	1.2	Q615	
16	0.1	61	3.3	11	4.4	C	3.9	E	3.2
17	0.3	62	3.3	12	1.7	B	1.8	C	1.1
18	0.1	63	3.3	13	0	Q605		B	2.6
19	1.7	64	3.3	14	0	E	7.0	Q616	
20	3.1	IC603		15	1.7	C	8.0	E	1.7
21	0	1	-6.9	16	1.7	B	7.7	C	0
22	0	2	-6.9	17	1.7	Q606		B	1.1
23	0	3	1.0	18	1.7	E	4.8	Q617	
24	0	4	0	19	1.4	C	2.8	E	1.1
25	3.3	5	-0.1	20	1.8	B	4.6	C	4.5
26	3.3	6	3.9	21	1.6			B	1.7
27	0.1	7	0	22	0			TP601	1.6

IC601 SIGNAL NAME

PIN No.	I/O	SIGNAL NAME
IC601		
1	—	VCC
2	I	R
3	—	VCC
4	O	VO
5	—	LG
6	—	OG
7	I	ΦH2
8	I	ΦH1
9	—	VCC
10	I	SUB
11	I	PT
12	I	ΦV1
13	I	ΦV2
14	I	ΦV3
15	I	ΦV4
16	—	GND

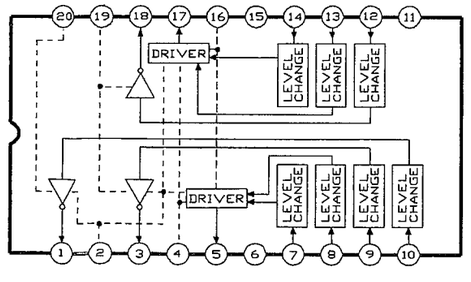
IC602 SIGNAL NAME

PIN No.	I/O	SIGNAL NAME	PIN No.	I/O	SIGNAL NAME
IC602			41	I	VDD
1	—	GND	42	O	RESET PULSE WIDTH
2	I	OSC IN(28.636Hz)	43	I	RESET PULSE WIDTH
3	O	OSC OUT(28.636Hz)	44	I	V CONTROL
4	—	SERIAL DATA	45	O	DOUBLE SAMPLING PULSE 1
5	O	SUB CARRIER(14MHz)	46	O	DOUBLE SAMPLING PULSE
6	O	DIGITAL CLOCK PULSE	47	O	ANALOG SAMPLING PULSE
7	—	————	48	—	————
8	—	SERIAL CLOCK	49	O	SAMPLING PULSE 1
9	O	CLAMP PULSE	50	I	SAMPLING PULSE 1
10	O	PRE BLANKING PULSE 1	51	—	CHARGE STOP
11	O	OB CLAMP PULSE	52	I	DOUBLE SAMPLING PULSE 1 WIDTH
12	O	BLANKING PULSE	53	O	DOUBLE SAMPLING PULSE 1 WIDTH
13	O	BURST FLAG PULSE	54	I	DOUBLE SAMPLING PULSE 2 WIDTH
14	O	H CLEAR PULSE	55	O	DOUBLE SAMPLING PULSE 2 WIDTH
15	—	————	56	I	VDD
16	O	SIGNAL CLAMP PULSE	57	—	————
17	O	H SYNC	58	I	FCK2 DUTY
18	O	V SYNC	59	O	FCK2 DUTY
19	O	COLOR SEPARATION CONTROL	60	—	————
20	O	COMPOSITE SYNC	61	—	————
21	—	————	62	—	————
22	I	LOAD	63	—	CLOCK PHASE SELECT 1
23	I	SUB CONTROL PULSE	64	I	VDD
24	—	GND			
25	I	VDD			
26	O	SUB CONTROL PULSE			
27	O	V1 PULSE			
28	O	V2 PULSE			
29	O	V3 PULSE			
30	O	V4 PULSE			
31	O	CHARGE PULSE 1			
32	O	CHARGE PULSE 2			
33	O	VDD			
34	O	VSS			
35	O	H2 PULSE			
36	O	H1 PULSE			
37	O	RESET			
38	I	ADS PHASE SELECT 1			
39	—	————			
40	—	GND			

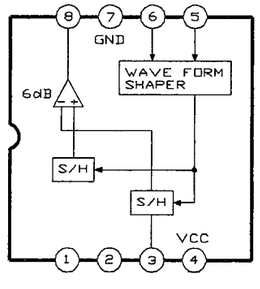


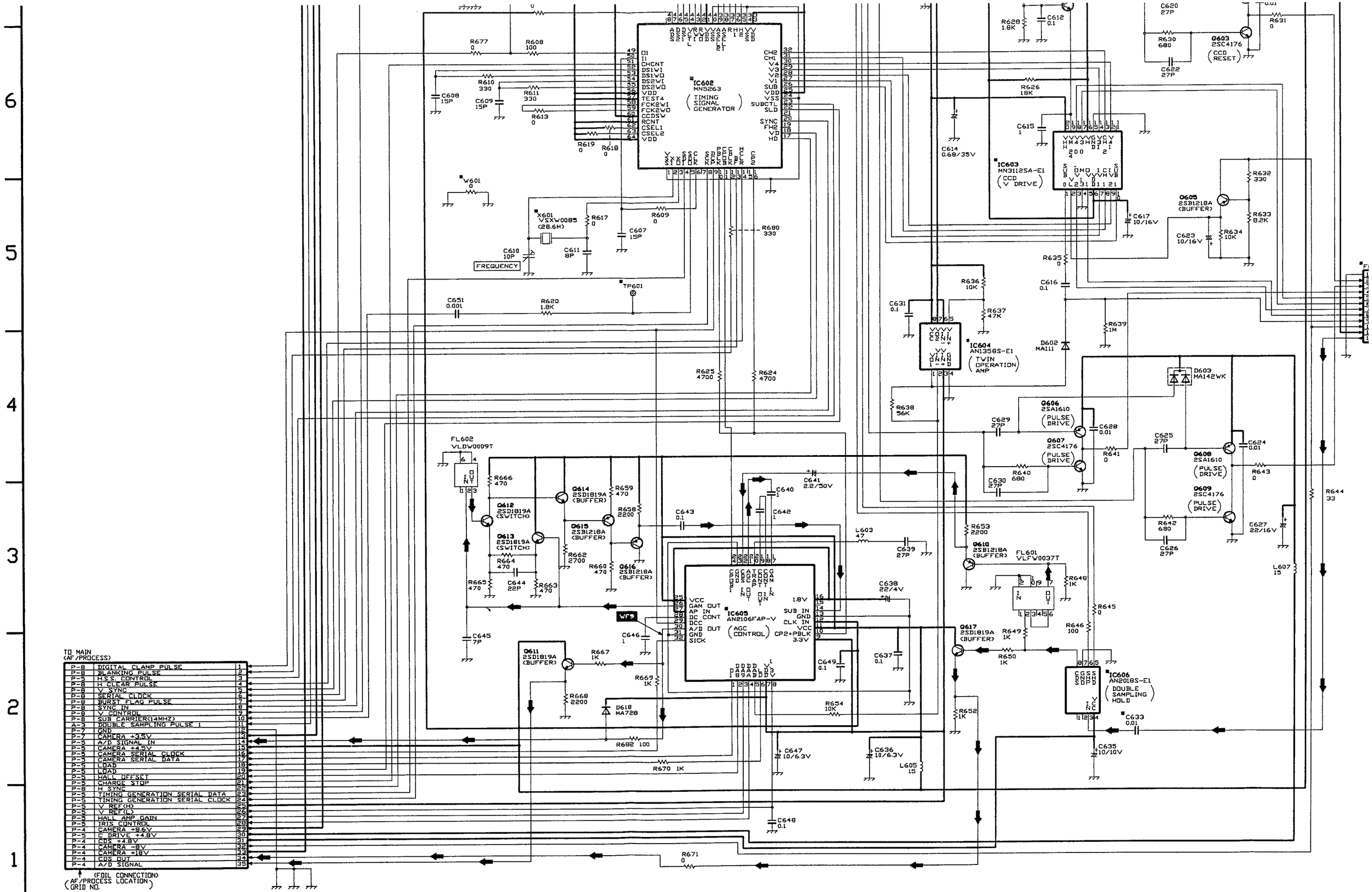
IC BLOCK DIAGRAM

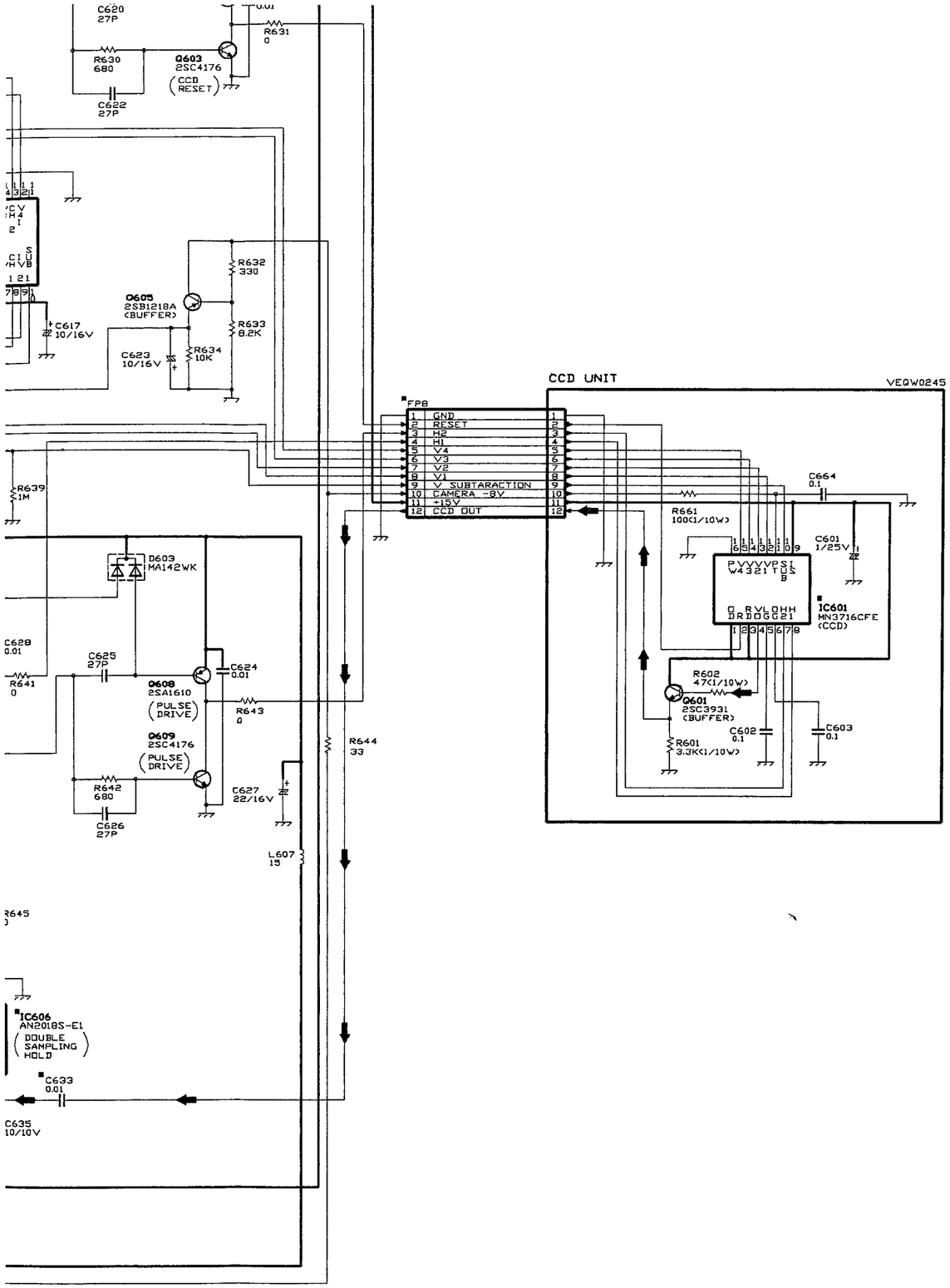
IC603



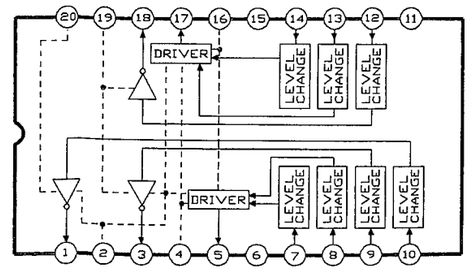
IC606



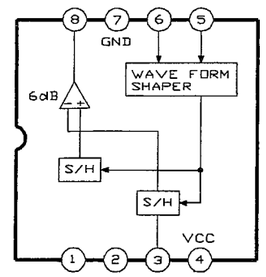

IC602
MN5263
(TIMING SIGNAL GENERATOR)
IC603
MN3112SA-E1
(CCD V DRIVE)
IC604
AN1358S-E1
(TWIN OPERATION AMP)
IC605
AN2106FAP-V
(AGC CONTROL)
IC606
AN2018S-E1
(DOUBLE SAMPLING HOLD)
X601
VSXW0085
(28.6M)
FREQUENCY
W601
TP601
FL602
VLDW0009T
FL601
VLFW0037T
Q603
2SC4176
(CCD RESET)
Q605
2SB1218A
(BUFFER)
Q606
2SA1610
(PULSE DRIVE)
Q607
2SC4176
(PULSE DRIVE)
Q608
2SA1610
(PULSE DRIVE)
Q609
2SC4176
(PULSE DRIVE)
Q610
2SB1218A
(BUFFER)
Q611
2SD1819A
(BUFFER)
Q612
2SD1819A
(SWITCH)
Q613
2SD1819A
(SWITCH)
Q614
2SD1819A
(BUFFER)
Q615
2SB1218A
(BUFFER)
Q616
2SB1218A
(BUFFER)
Q617
2SD1819A
(BUFFER)
D602
MA111
D603
MA142WK
D618
MA728
WF9
TO MAIN
(AF/PROCESS)
P-8 DIGITAL CLAMP PULSE 1
P-8 BLANKING PULSE 2
P-5 H.S.S. CONTROL 3
P-8 H CLEAR PULSE 4
P-8 V SYNC 5
P-8 SERIAL CLOCK 6
P-8 BURST FLAG PULSE 7
P-8 SYNC IN 8
P-8 V CONTROL 9
P-8 SUB CARRIER(14MHZ) 10
A-3 DOUBLE SAMPLING PULSE 1 11
P-7 GND 12
P-7 CAMERA +3.5V 13
P-5 A/D SIGNAL IN 14
P-5 CAMERA +4.5V 15
P-5 CAMERA SERIAL CLOCK 16
P-5 CAMERA SERIAL DATA 17
P-5 LOAD 18
P-5 LOAD 19
P-5 HALL OFFSET 20
P-5 CHARGE STOP 21
P-8 H SYNC 22
P-5 TIMING GENERATION SERIAL DATA 23
P-5 TIMING GENERATION SERIAL CLOCK 24
P-5 V REF(H) 25
P-5 V REF(L) 26
P-5 HALL AMP GAIN 27
P-5 IRIS CONTROL 28
P-4 CAMERA +8.6V 29
P-5 C DRIVE +4.8V 30
P-4 CDS +4.8V 31
P-4 CAMERA -8V 32
P-4 CAMERA +18V 33
P-4 CDS OUT 34
P-4 A/D SIGNAL 35
(FOIL CONNECTION)
(AF/PROCESS LOCATION)
(GRID NO.)



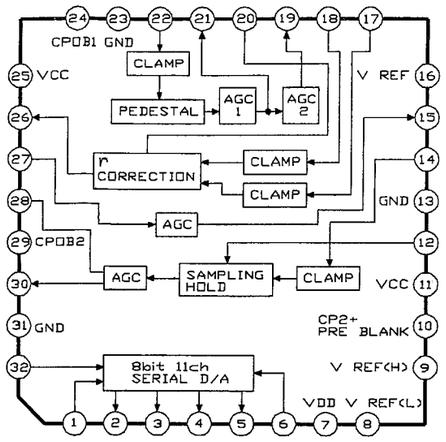
IC603



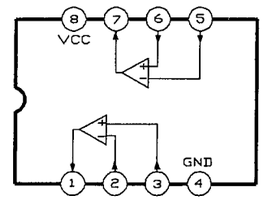
IC606



IC605



IC604



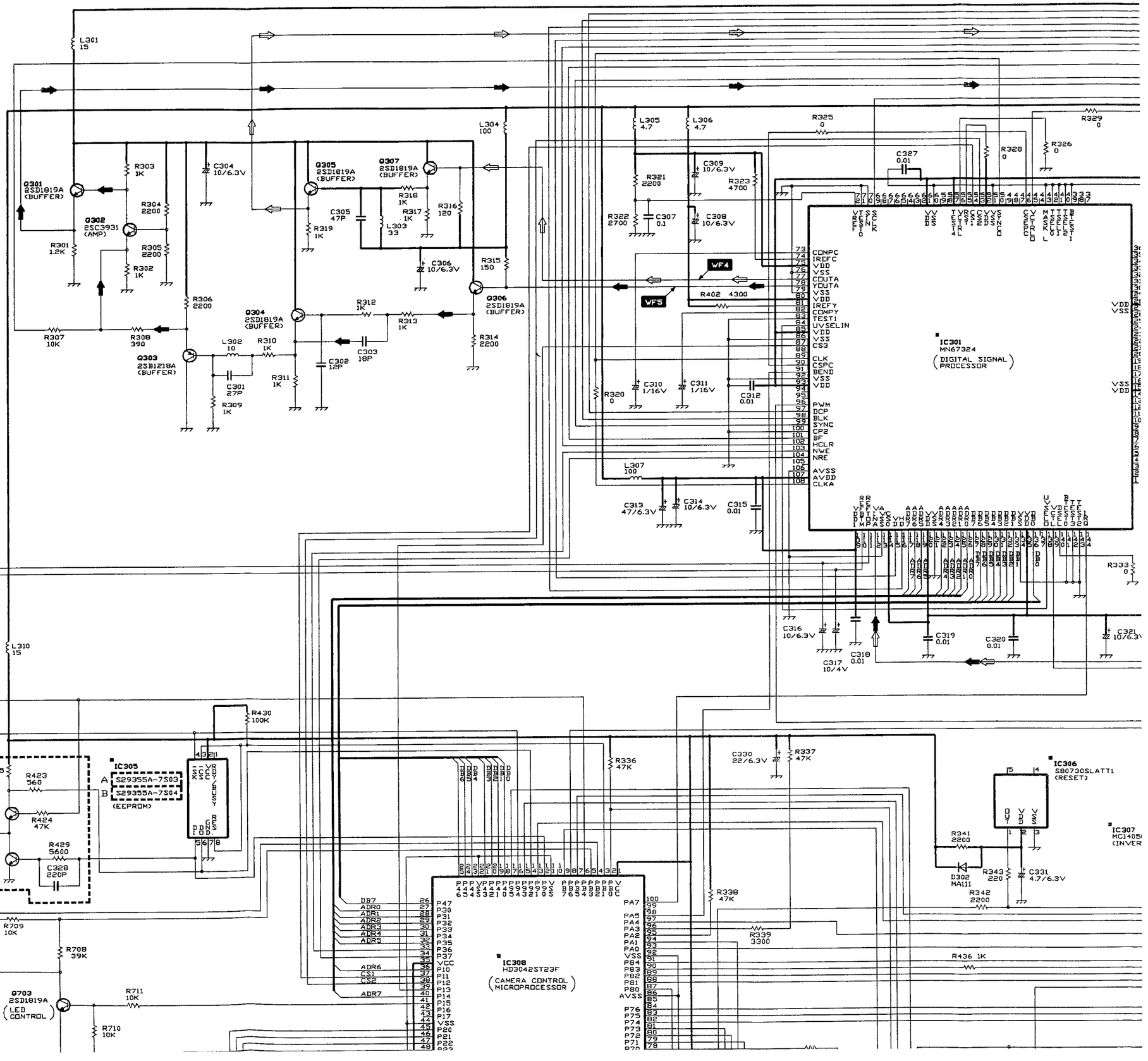
MAIN (CCD DRIVE) SECTION	
TRANSISTOR	
Q601	J-4
Q602	H-7
Q603	H-6
Q604	G-7
Q605	H-5
Q606	G-4
Q607	G-4
Q608	H-4
Q609	H-3
Q610	G-3
Q611	D-2
Q612	D-3
Q613	D-3
Q614	D-3
Q615	D-3
Q616	D-3
Q617	G-2
IC	
IC601	K-4
IC602	E-6
IC603	G-6
IC604	G-4
IC605	E-3
IC606	H-2
CONNECTOR	
FP8	I-5
TEST POINT	
TP601	E-5
ADJUSTMENT	
C610	D-5

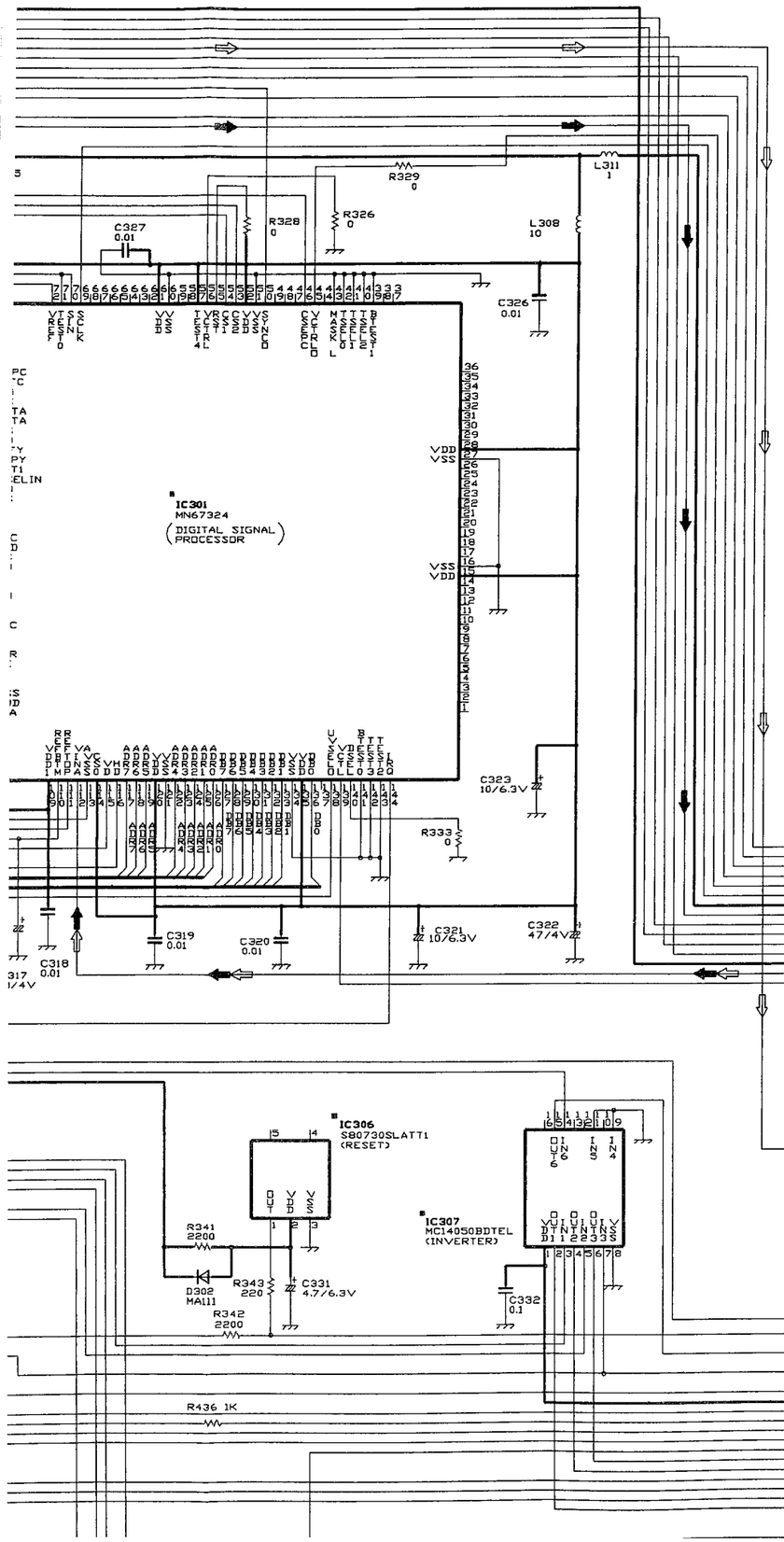
H I J K L M N O P

MAIN(AF/PROCESS) SCHEMATIC DIAGRAMS

PREVIDEO (LUMINANCE) SIGNAL PATH

PREVIDEO (CHROMA) SIGNAL PATH





VOLTAGE CHART

MODE	
PIN No.	CAMERA
IC301	
1	1.7
2	0
3	0
4	0
5	3.4
6	0
7	3.4
8	3.4
9	3.4
10	0
11	0
12	0
13	0
14	0
15	3.5
16	0
17	0
18	0
19	0
20	0
21	0
22	0
23	0
24	0
25	0
26	0
27	0
28	3.5
29	0
30	0
31	0
32	0
33	0
34	0
35	0
36	0
37	0
38	0
39	0
40	0
41	0
42	0
43	0
44	0
45	0
46	1.8
47	0.1
48	1.6
49	0.8
50	3.2
51	0

MODE	
PIN No.	CAMERA
52	3.5
53	0
54	0.1
55	3.5
56	0
57	3.5
58	1.1
59	1.1
60	0
61	3.5
62	1.1
63	1.1
64	1.1
65	1.1
66	1.1
67	1.1
68	1.2
69	1.7
70	0
71	0
72	1.9
73	1.0
74	1.9
75	3.5
76	0
77	3.1
78	2.7
79	0
80	3.5
81	1.9
82	1.0
83	0
84	1.7
85	3.5
86	0
87	0
88	0.1
89	1.7
90	1.8
91	0
92	0
93	3.5
94	1.7
95	1.7
96	1.4
97	0
98	1.1
99	3.1
100	0
101	0.1
102	0.3
103	3.4

MODE	
PIN No.	CAMERA
104	3.4
105	0
106	0
107	3.4
108	1.7
109	3.4
110	1.3
111	3.3
112	1.8
113	0
114	3.5
115	0.1
116	0.3
117	0
118	0
119	0
120	3.5
121	0
122	0.2
123	3.3
124	0.7
125	1.5
126	2.8
127	0.8
128	1.0
129	0.8
130	1.7
131	1.1
132	1.7
133	0.9
134	0
135	3.5
136	1.2
137	0
138	1.7
139	0
140	0
141	0
142	0
143	0
144	0
IC305	
1	3.5
2	3.5
3	3.4
4	0
5	0
6	3.4
7	0
8	3.4

MODE	
PIN No.	CAMERA
IC306	
1	3.5
2	3.5
3	0
4	0
5	0
IC307	
1	4.4
2	4.4
3	3.4
4	0
5	0
6	0.1
7	0.1
8	0
9	0
10	0
11	0
12	0
13	0
14	1.5
15	2.5
16	0
IC308	
1	3.5
2	3.4
3	3.4
4	3.2
5	3.2
6	0
7	34
8	1.5
9	1.5
10	1.0
11	0
12	0
13	0
14	0
15	0
16	3.4
17	0
18	0
19	1.0
20	1.6
21	0.8
22	0
23	1.6
24	0.9
25	0.8
26	0.6
27	2.8
28	1.5

MODE	
PIN No.	CAMERA
29	0.7
30	3.3
31	0
32	0
33	3.4
34	3.4
35	3.5
36	0
37	0.1
38	0
39	0
40	0
41	0
42	0.1
43	3.2
44	0
45	3.4
46	3.4
47	3.4
48	0
49	0
50	0
51	0
52	0
53	3.5
54	3.5
55	3.4
56	0
57	0
58	3.4
59	3.4
60	3.4
61	1.5
62	3.5
63	3.5
64	3.5
65	0
66	1.7
67	0.8
68	0
69	0
70	0
71	0
72	0
73	0
74	3.5
75	3.5
76	3.5
77	3.3
78	1.7
79	2.1
80	1.9

MODE	
PIN No.	CAMERA
81	0
82	3.3
83	3.3
84	3.3
85	0
86	0
87	0
88	0
89	0
90	3.2
91	3.4
92	0
93	0.3
94	3.4
95	0
96	0
97	0.1
98	0
99	0
100	0
IC309	
1	2.4
2	2.0
3	2.0
4	10.1
5	1.3
6	1.4
7	1.3
8	3.2
9	0.8
10	0.8
11	0
12	0.4
13	0.4
14	1.9
IC701	
1	0.2
2	0
3	0
4	1.3
5	1.3
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0

MODE	
PIN No.	CAMERA
IC702	
1	0
2	0
3	0
4	1.2
5	1.2
6	0
7	0
8	0
9	0
10	0
11	0
12	0
13	0
14	0
Q101	
1	6.3
2	3.4
3	2.8
4	0
5	3.4
6	2.8
Q102	
E	6.9
C	4.9
B	6.3
Q103	
E	6.9
C	4.8
B	6.3
Q104	
1	6.3
2	4.6
3	4.0
4	4.8
5	5.0
6	4.0
Q301	
E	2.4
C	4.4
B	3.0
Q302	
E	1.5
C	2.8
B	2.2
Q303	
E	1.3
C	0
B	0.7

MODE	
PIN No.	CAMERA
Q304	
E	1.4
C	4.5
B	2.0
Q305	
E	2.8
C	4.5
B	3.4
Q306	
E	2.0
C	4.5
B	2.6
Q307	
E	2.5
C	4.5
B	3.1
Q308	
E	4.5
C	3.5
B	0
Q309	
E	0
C	4.5
B	0
Q310	
E	2.0
C	4.5
B	2.6
Q311	
E	1.3
C	4.5
B	0
Q703	
E	0
C	3.0
B	0

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-L657	A
PV-L757	B

MAIN (AF/PROCESS) SECTION	
TRANSISTOR	
Q101	M-3
Q102	M-4
Q103	M-5
Q104	M-4
Q308	C-6
Q309	C-6
Q310	K-4
Q703	C-5
IC	
IC301	H-9
IC305	D-6
IC306	I-6
IC307	I-6
IC308	F-6
IC309	J-3
IC701	D-3
IC702	F-3
CONNECTOR	
FP3	D-6
FP9	B-2
S101	D-2

TO MAIN (CCD DRIVE)

1	DIGITAL CLAMP PULSE	A-2
2	BLANKING PULSE	A-2
22	H SYNC	A-1
3	V SYNC	A-2
4	H CLEAR PULSE	A-2
5	SERIAL CLOCK	A-2
7	BURST FLAG PULSE	A-2
8	SYNC IN	A-2
9	V CONTROL	A-2
10	SUB CARRIER(14MHZ)	A-2
12	GND	A-2

(FOIL CONNECTION)
(CCD DRIVE LOCATION GRID NO.)

TO MAIN(SERVO/SYSTEM CONTROL)

1	DEW ON(H)	N-9
2	REC LED ON(L)	N-9
3	REC/PAUSE SWITCH(L)	N-9
4	LED +B	N-9
5	POWER LED ON(L)	N-9

(FOIL CONNECTION)
(SERVO/SYSTEM CONTROL LOCATION GRID NO.)

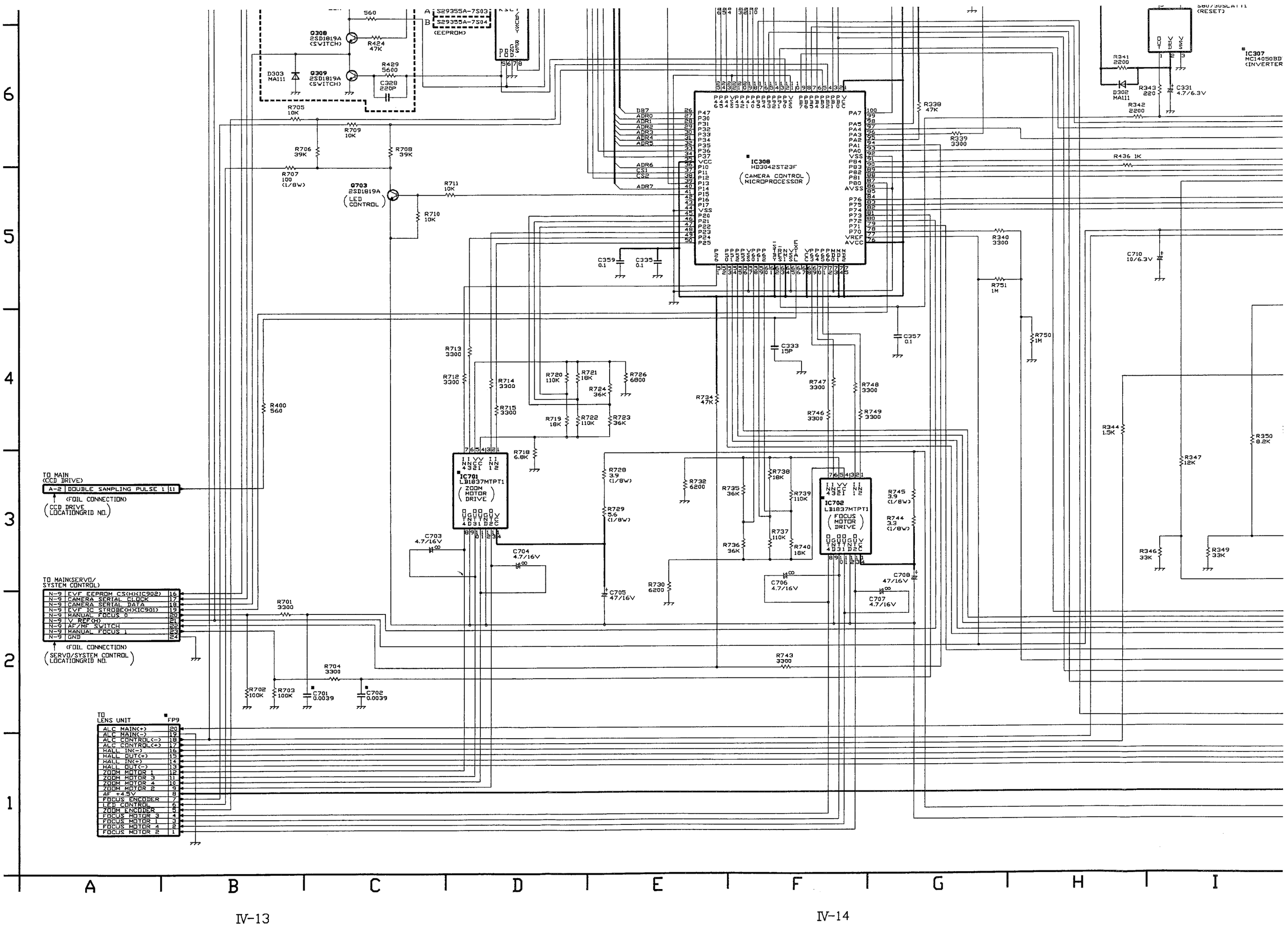
TO TOP CONNECTOR UNIT

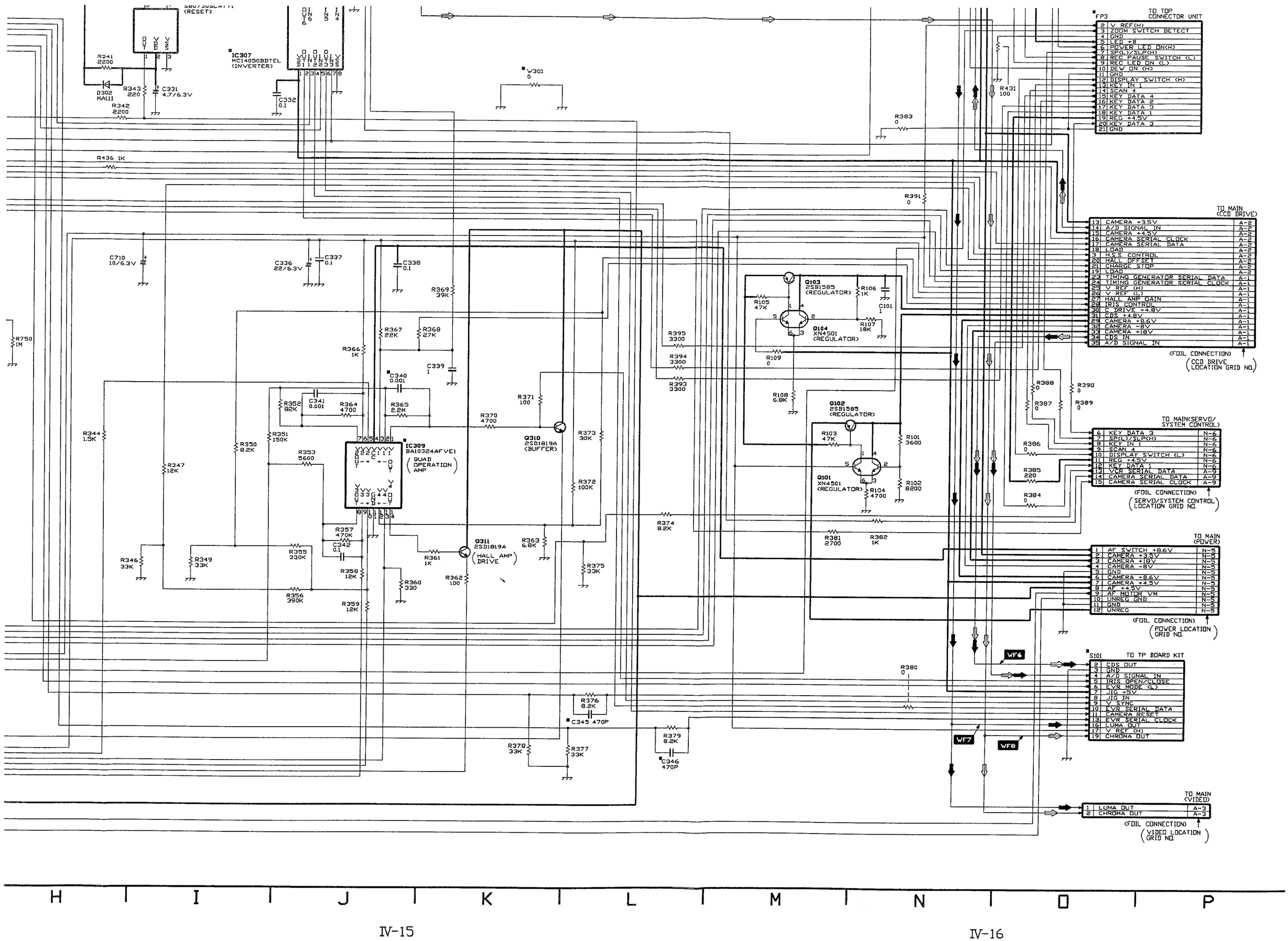
FP3

2	V REF(H)
3	ZOOM SWITCH DETECT
4	GND
5	LED +B
6	POWER LED ON(H)
7	SPC(L)/SLPC(H)
8	REC PAUSE SWITCH (L)
9	REC LED ON (L)
10	DEW ON (H)
11	GND
12	DISPLAY SWITCH (H)
13	KEY IN 1
14	SCAN 4
15	KEY DATA 4
16	KEY DATA 2
17	KEY DATA 3
18	KEY DATA 1
19	REG +4.5V
20	KEY DATA 3
21	GND

TO MAIN (CCD DRIVE)

13	CAMERA +3.5V	A-2
14	A/D SIGNAL IN	A-2
15	CAMERA +4.5V	A-2
16	CAMERA SERIAL CLOCK	A-2


IC308
HD3042ST23F
(CAMERA CONTROL MICROPROCESSOR)
IC701
LB1837MTPT1
(ZOOM MOTOR DRIVE)
IC702
LB1837MTPT1
(FOCUS MOTOR DRIVE)
IC307
MC14050BD
(INVERTER
Q308
2SD1819A
(SWITCH)
Q309
2SD1819A
(SWITCH)
Q703
2SD1819A
(LED CONTROL)
S29355A-7S03
S29355A-7S04
(EEPROM)
D303
MA111
D302
MA111
R400 560
R424 47K
R429 5600
C328 220P
R705 10K
R706 39K
R707 100 (1/8W)
R708 39K
R709 10K
R710 10K
R711 10K
R338 47K
R339 3300
R340 3300
R751 1M
R750 1M
R436 1K
R341 2200
R342 2200
R343 220
C331 4.7/6.3V
C710 10/6.3V
C359 0.1
C335 0.1
C357 0.1
C333 15P
R713 3300
R712 3300
R714 3300
R715 3300
R720 110K
R721 18K
R724 36K
R726 6800
R719 18K
R722 110K
R723 36K
R734 47K
R747 3300
R748 3300
R746 3300
R749 3300
R718 6.8K
R728 3.9 (1/8W)
R729 5.6 (1/8W)
R732 6200
R730 6200
R735 36K
R736 36K
R738 18K
R739 110K
R737 110K
R740 18K
R745 3.9 (1/8W)
R744 3.3 (1/8W)
C703 4.7/16V
C704 4.7/16V
C705 47/16V
C706 4.7/16V
C707 4.7/16V
C708 47/16V
R743 3300
R701 3300
R704 3300
R702 100K
R703 100K
C701 0.0039
C702 0.0039
R344 1.5K
R350 8.2K
R347 12K
R346 33K
R349 33K
DB7
ADR0
ADR1
ADR2
ADR3
ADR4
ADR5
ADR6
CS1
CS2
ADR7
TO MAIN (CCD DRIVE)
A-2 | DOUBLE SAMPLING PULSE 1 | 11
(FOIL CONNECTION)
(CCD DRIVE LOCATIONGRID NO.)
TO MAIN(SERVO/ SYSTEM CONTROL)
N-9 | EVF EEPROM CS(H)(IC902) | 16
N-9 | CAMERA SERIAL CLOCK | 17
N-9 | CAMERA SERIAL DATA | 18
N-9 | EVF IC STROBE(H)(IC901) | 19
N-9 | MANUAL FOCUS 0 | 20
N-9 | V REF(H) | 21
N-9 | AF/MF SWITCH | 22
N-9 | MANUAL FOCUS 1 | 23
N-9 | GND | 24
(FOIL CONNECTION)
(SERVO/SYSTEM CONTROL LOCATIONGRID NO.)
TO LENS UNIT FP9
ALC MAIN(+) 20
ALC MAIN(-) 19
ALC CONTROL(-) 18
ALC CONTROL(+) 17
HALL IN(-) 16
HALL OUT(+) 15
HALL IN(+) 14
HALL OUT(-) 13
ZOOM MOTOR 1 12
ZOOM MOTOR 3 11
ZOOM MOTOR 4 10
ZOOM MOTOR 2 9
AF +4.5V 8
FOCUS ENCODER 7
LED CONTROL 6
ZOOM ENCODER 5
FOCUS MOTOR 3 4
FOCUS MOTOR 1 3
FOCUS MOTOR 4 2
FOCUS MOTOR 2 1


IC307
MC14050BDTEL
(INVERTER)
(RESET)
D302
MA111
R341 2200
R342 2200
R343 220
C331 4.7/6.3V
C332 0.1
W301 0
R383 0
R431 100
FP3
TO TOP CONNECTOR UNIT
2 V REF(H)
3 ZOOM SWITCH DETECT
4 GND
5 LED +B
6 POWER LED ON(H)
7 SP(L)/SLP(H)
8 REC PAUSE SWITCH (L)
9 REC LED ON (L)
10 DEW ON (H)
11 GND
12 DISPLAY SWITCH (H)
13 KEY IN 1
14 SCAN 4
15 KEY DATA 4
16 KEY DATA 2
17 KEY DATA 3
18 KEY DATA 1
19 REG +4.5V
20 KEY DATA 3
21 GND
R436 1K
R391 0
TO MAIN (CCD DRIVE)
13 CAMERA +3.5V A-2
14 A/D SIGNAL IN A-2
15 CAMERA +4.5V A-2
16 CAMERA SERIAL CLOCK A-2
17 CAMERA SERIAL DATA A-2
18 LOAD A-2
3 H.S.S CONTROL A-2
20 HALL OFFSET A-2
21 CHARGE STOP A-2
19 LOAD A-2
23 TIMING GENERATOR SERIAL DATA A-1
24 TIMING GENERATOR SERIAL CLOCK A-1
25 V REF (H) A-1
26 V REF (L) A-1
27 HALL AMP GAIN A-1
28 IRIS CONTROL A-1
30 C DRIVE +4.8V A-1
31 CDS +4.8V A-1
29 CAMERA +8.6V A-1
32 CAMERA -8V A-1
33 CAMERA +18V A-1
34 CDS IN A-1
35 A/D SIGNAL IN A-1
(FOIL CONNECTION)
(CCD DRIVE LOCATION GRID NO.)
C710 10/6.3V
C336 22/6.3V
C337 0.1
C338 0.1
R369 39K
R750 1M
R367 82K
R368 27K
R366 1K
C339 1
C340 0.001
R352 82K
C341 0.001
R364 4700
R365 2.2M
R344 1.5K
R347 12K
R350 8.2K
R351 150K
R353 5600
IC309
BA10324AFVE1
(QUAD OPERATION AMP)
R357 470K
C342 0.1
R358 12K
R359 12K
R360 330
R361 1K
R362 100
Q311
2SD1819A
(HALL AMP DRIVE)
R363 6.8K
R355 330K
R356 390K
R346 33K
R349 33K
R375 33K
R370 4700
R371 100
Q310
2SD1819A
(BUFFER)
R373 30K
R372 100K
R374 8.2K
R376 8.2K
C345 470P
R378 33K
R377 33K
R379 8.2K
C346 470P
R395 3300
R394 3300
R393 3300
Q103
2SB1585
(REGULATOR)
R105 47K
R106 1K
C101 1
Q104
XN4501
(REGULATOR)
R107 18K
R109 0
R108 6.8K
Q102
2SB1585
(REGULATOR)
R103 47K
R101 3600
Q101
XN4501
(REGULATOR)
R104 4700
R102 8200
R381 2700
R382 1K
R388 0
R387 0
R390 0
R389 0
R386 0
R385 220
R384 0
TO MAIN(SERVO/ SYSTEM CONTROL)
6 KEY DATA 3 N-6
7 SP(L)/SLP(H) N-6
8 KEY IN 1 N-6
9 SCAN 4 N-6
10 DISPLAY SWITCH (L) N-6
11 REG +4.5V N-6
12 KEY DATA 1 N-6
13 VCR SERIAL DATA A-9
14 CAMERA SERIAL DATA A-9
15 CAMERA SERIAL CLOCK A-9
(FOIL CONNECTION)
(SERVO/SYSTEM CONTROL LOCATION GRID NO.)
TO MAIN (POWER)
1 AF SWITCH +8.6V N-5
2 CAMERA +3.5V N-5
3 CAMERA +18V N-5
4 CAMERA -8V N-5
5 GND N-5
6 CAMERA +8.6V N-5
7 CAMERA +4.5V N-5
8 AF +4.5V N-5
9 AF MOTOR VM N-5
10 UNREG GND N-5
11 GND N-5
12 UNREG N-5
(FOIL CONNECTION)
(POWER LOCATION GRID NO.)
R380 0
WF6
WF7
WF8
S101
TO TP BOARD KIT
2 CDS OUT
3 GND
4 A/D SIGNAL IN
5 IRIS OPEN/CLOSE
6 EVR MODE (L)
7 JIG +5V
8 JIG IN
9 V SYNC
10 EVR SERIAL DATA
11 CAMERA RESET
13 EVR SERIAL CLOCK
16 LUMA OUT
17 V REF (H)
19 CHROMA OUT
TO MAIN (VIDEO)
1 LUMA OUT A-3
2 CHROMA OUT A-3
(FOIL CONNECTION)
(VIDEO LOCATION GRID NO.)

H I J K L M N O P

MAIN(AF/PROCESS) SCHEMATIC DIAGRAMS

IC301 SIGNAL NAME

PIN No.	I/O	SIGNAL NAME	PIN No.	I/O	SIGNAL NAME	PIN No.	I/O	SIGNAL NAME	PIN No.	I/O	SIGNAL NAME	PIN No.	I/O	SIGNAL NAME
IC301			34	—	———	68	—	———	102	I	H CLEAR PULSE	136	I/O	MICROPROCESSOR DATA 0
1	—	———	35	—	———	69	I	SERIAL CLOCK	103	I	WRITE ENABLE	137	—	———
2	—	———	36	—	———	70	—	GND	104	I	READ ENABLE	138	O	R-Y(L)/B-Y(H)
3	—	———	37	—	———	71	—	GND	105	—	———	139	I	V CONTROL
4	—	———	38	—	———	72	—	V REF	106	—	GND	140	I	DIGITAL CLOCK SELECT
5	—	———	39	—	GND	73	—	CHROMA D/A CONTROL	107	—	VDD	141	—	GND
6	—	———	40	—	GND	74	—	CHROMA D/A I REF	108	I	CLOCK	142	—	GND
7	—	———	41	—	GND	75	—	VDD	109	—	VDD	143	—	GND
8	—	———	42	—	GND	76	—	GND	110	I	A/D REFER(L)	144	I	DIS IRQ
9	—	———	43	—	GND	77	O	CHROMA OUT	111	I	A/D REFER(H)			
10	—	———	44	—	———	78	O	LUMINANCE OUT	112	I	A/D SIGNAL IN			
11	—	———	45	I	V CONTROL	79	—	GND	113	—	GND			
12	—	———	46	I	COLOR SEPARATION CONTROL	80	—	VDD	114	—	CSO			
13	—	———	47	—	———	81	—	LUMINANCE D/A I REF	115	I	V SYNC			
14	—	———	48	—	———	82	—	LUMINANCE D/A CONTROL	116	I	H SYNC			
15	—	VDD	49	—	———	83	—	GND	117	I	MICROPROCESSOR ADDRESS 6			
16	—	GND	50	O	COMPOSITE SYNC	84	O	R-Y(L)/B-Y(H)	118	I	MICROPROCESSOR ADDRESS 7			
17	—	———	51	—	GND	85	—	VDD	119	I	MICROPROCESSOR ADDRESS 5			
18	—	———	52	—	VDD	86	—	GND	120	—	VDD			
19	—	———	53	I	CHIP SELECT 2	87	I	CHIP SELECT 3	121	—	GND			
20	—	———	54	I	CHIP SELECT 1	88	—	———	122	I	MICROPROCESSOR ADDRESS 4			
21	—	———	55	—	———	89	—	CLOCK	123	I	MICROPROCESSOR ADDRESS 3			
22	—	———	56	I	V CONTROL	90	I	COLOR SEPARATION CONTROL	124	I	MICROPROCESSOR ADDRESS 2			
23	—	———	57	—	TEST 4	91	O	BLOCK END IRQ	125	I	MICROPROCESSOR ADDRESS 1			
24	—	———	58	—	———	92	—	GND	126	I	MICROPROCESSOR ADDRESS 0			
25	—	———	59	—	———	93	—	VDD	127	I/O	MICROPROCESSOR DATA 7			
26	—	———	60	—	GND	94	—	———	128	I/O	MICROPROCESSOR DATA 6			
27	—	———	61	—	VDD	95	—	———	129	I/O	MICROPROCESSOR DATA 5			
28	—	———	62	—	———	96	O	PULSE WIDTH MODURATOR	130	I/O	MICROPROCESSOR DATA 4			
29	—	———	63	—	———	97	I	DIGITAL CLAMP PULSE	131	I/O	MICROPROCESSOR DATA 3			
30	—	———	64	—	———	98	I	BLANKING PULSE	132	I/O	MICROPROCESSOR DATA 2			
31	—	———	65	—	———	99	I	COMPOSITE SYNC	133	I/O	MICROPROCESSOR DATA 1			
32	—	———	66	—	———	100	—	GND	134	—	GND			
33	—	———	67	—	———	101	I	BURST FLAG PULSE	135	—	VDD			

IC305 SIGNAL NAME

PIN No.	I/O	SIGNAL NAME
IC305		
1	—	———
2	O	VDD
3	—	CS(L)
4	I	SERIAL CLOCK
5	I	SERIAL DATA
6	O	SERIAL DATA
7	—	GND
8	—	RESET

IC306 SIGNAL NAME

PIN No.	I/O	SIGNAL NAME
IC306		
1	O	RESET(L)
2	—	VDD
3	—	GND
4	—	———
5	—	———

IC308 KEY MATRIX CHART

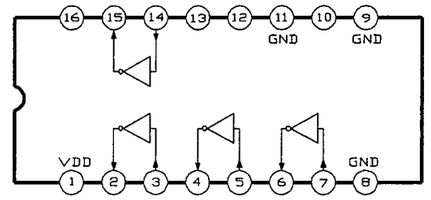
VOLTAGE(V)	0~0.3V	0.55~1.15V	1.4~2.0V	2.25~2.85V
KEY DATA 2 (PIN 82)	EIS (SW812)	DIGITAL ZOOM (SW813)	———	H.S.SHUTTER (SW814)
KEY DATA 3 (PIN 83)	COLOR (SW808)	MODE SELECT (SW809)	BACK LIGHT (SW810)	FADE (SW811)
KEY DATA 4 (PIN 84)	NEGATIVE /POSITIVE (SW806)	SECURITY MODE (SW807)	———	———

IC308 SIGNAL NAME

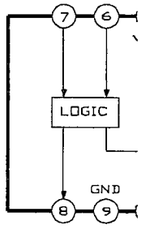
PIN No.	I/O	SIGNAL NAME	PIN No.	I/O	SIGNAL NAME	PIN No.	I/O	SIGNAL NAME
IC308		———	34	O	READ ENABLE	68	—	VDD
1	—	VDD	35	—	VDD	69	O	FOCUS DRIVE PULSE 1
2	I	EVR MODE	36	O	MICROPROCESSOR ADDRESS 6	70	O	FOCUS DRIVE PULSE 2
3	O	RESET	37	O	CHIP SELECT 1	71	O	FOCUS DRIVE PULSE 3
4	I	ZOOM ENCORDER	38	O	CHIP SELECT 2	72	O	FOCUS DRIVE PULSE 4
5	I	FOCUS ENCORDER	39	O	CHIP SELECT 3	73	—	GND
6	O	EVF EEPROM CS(H)	40	O	MICROPROCESSOR ADDRESS 7	74	—	VDD
7	O	CAMERA SERIAL CLOCK	41	O	LED CONTROL	75	—	VDD
8	O	CAMERA SERIAL DATA	42	O	RAM DUMP SERIAL CLOCK	76	—	VDD
9	I	VCR SERIAL DATA	43	O	RAM DUMP SERIAL DATA	77	I	V REF(H)
10	O	RESET	44	—	GND	78	I	VARIAVLE ZOOM
11	—	GND	45	O	ZOOM DRIVE COMPARE PULSE 1	79	I	F VALUE
12	O	EEPROM SERIAL DATA	46	O	ZOOM DRIVE COMPARE PULSE 2	80	I	MANUAL FOCUS 1
13	O	EVR SERIAL DATA	47	O	ZOOM DRIVE COMPARE PULSE 3	81	I	MANUAL FOCUS 2
14	I	EEPROM SERIAL DATA	48	O	ZOOM DRIVE PULSE 1	82	I	KEY DATA 2
15	I	EVR SERIAL DATA	49	O	ZOOM DRIVE PULSE 2	83	I	KEY DATA 3
16	O	EEPROM SERIAL CLOCK	50	O	ZOOM DRIVE PULSE 3	84	I	KEY DATA 4
17	O	EVR SERIAL CLOCK	51	O	ZOOM DRIVE PULSE 4	85	—	———
18	I/O	MICROPROCESSOR DATA 0	52	—	———	86	—	GND
19	I/O	MICROPROCESSOR DATA 1	53	O	TIMING GENERATOR SERIAL CLOCK	87	O	EVF IC STROBE(H)
20	I/O	MICROPROCESSOR DATA 2	54	O	TIMING GENERATOR SERIAL DATA	88	O	H.S.S.CONTROL
21	I/O	MICROPROCESSOR DATA 3	55	O	TIMING GENERATOR SERIAL LOAD	89	O	LOAD
22	—	GND	56	O	CHARGE STOP SELECT	90	O	CAMERA SERIAL DATA
23	I/O	MICROPROCESSOR DATA 4	57	—	GND	91	O	CAMERA SERIAL CLOCK
24	I/O	MICROPROCESSOR DATA 5	58	O	FOCUS DRIVE COMPARE PULSE 1	92	—	GND
25	I/O	MICROPROCESSOR DATA 6	59	O	FOCUS DRIVE COMPARE PULSE 2	93	I	H SYNC
26	I/O	MICROPROCESSOR DATA 7	60	O	FOCUS DRIVE COMPARE PULSE 3	94	I	AF/MF SWITCH
27	O	MICROPROCESSOR ADDRESS 0	61	—	———	95	—	VDD
28	O	MICROPROCESSOR ADDRESS 1	62	I	VDD	96	I	WIPE
29	O	MICROPROCESSOR ADDRESS 2	63	I	RESET	97	I	V SYNC
30	O	MICROPROCESSOR ADDRESS 3	64	I	VDD	98	I	BLOCK END IRQ
31	O	MICROPROCESSOR ADDRESS 4	65	—	GND	99	—	———
32	O	MICROPROCESSOR ADDRESS 5	66	—	DOUBLE SAMPLING PULSE 1	100	I	DIS IRQ
33	O	WRITE ENABLE	67	—	———			

IC BLOCK DIAGRAM

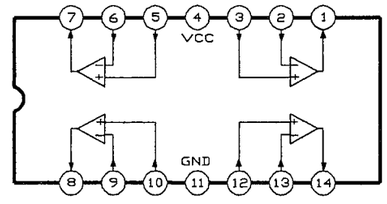
IC307



IC701
IC702



IC309



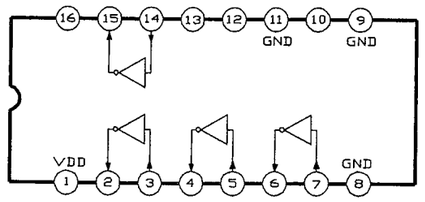
AMS

	PIN No.	I/O	SIGNAL NAME	PIN No.	I/O	SIGNAL NAME	PIN No.	I/O	SIGNAL NAME
	68	—		102	I	H CLEAR PULSE	136	I/O	MICROPROCESSOR DATA 0
	69	I	SERIAL CLOCK	103	I	WRITE ENABLE	137	—	
	70	—	GND	104	I	READ ENABLE	138	O	R-Y(L)/B-Y(H)
	71	—	GND	105	—		139	I	V CONTROL
	72	—	V REF	106	—	GND	140	I	DIGITAL CLOCK SELECT
	73	—	CHROMA D/A CONTROL	107	—	VDD	141	—	GND
	74	—	CHROMA D/A I REF	108	I	CLOCK	142	—	GND
	75	—	VDD	109	—	VDD	143	—	GND
	76	—	GND	110	I	A/D REFER(L)	144	I	DIS IRQ
	77	O	CHROMA OUT	111	I	A/D REFER(H)			
	78	O	LUMINANCE OUT	112	I	A/D SIGNAL IN			
	79	—	GND	113	—	GND			
TROL	80	—	VDD	114	—	CSO			
	81	—	LUMINANCE D/A I REF	115	I	V SYNC			
	82	—	LUMINANCE D/A CONTROL	116	I	H SYNC			
	83	—	GND	117	I	MICROPROCESSOR ADDRESS 6			
	84	O	R-Y(L)/B-Y(H)	118	I	MICROPROCESSOR ADDRESS 7			
	85	—	VDD	119	I	MICROPROCESSOR ADDRESS 5			
	86	—	GND	120	—	VDD			
	87	I	CHIP SELECT 3	121	—	GND			
	88	—		122	I	MICROPROCESSOR ADDRESS 4			
	89	—	CLOCK	123	I	MICROPROCESSOR ADDRESS 3			
	90	I	COLOR SEPARATION CONTROL	124	I	MICROPROCESSOR ADDRESS 2			
	91	O	BLOCK END IRQ	125	I	MICROPROCESSOR ADDRESS 1			
	92	—	GND	126	I	MICROPROCESSOR ADDRESS 0			
	93	—	VDD	127	I/O	MICROPROCESSOR DATA 7			
	94	—		128	I/O	MICROPROCESSOR DATA 6			
	95	—		129	I/O	MICROPROCESSOR DATA 5			
	96	O	PULSE WIDTH MODURATOR	130	I/O	MICROPROCESSOR DATA 4			
	97	I	DIGITAL CLAMP PULSE	131	I/O	MICROPROCESSOR DATA 3			
	98	I	BLANKING PULSE	132	I/O	MICROPROCESSOR DATA 2			
	99	I	COMPOSITE SYNC	133	I/O	MICROPROCESSOR DATA 1			
	100	—	GND	134	—	GND			
	101	I	BURST FLAG PULSE	135	—	VDD			

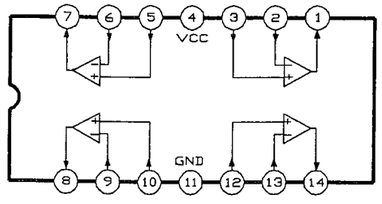
ME	PIN No.	I/O	SIGNAL NAME	PIN No.	I/O	SIGNAL NAME
	34	O	READ ENABLE	68	—	VDD
	35	—	VDD	69	O	FOCUS DRIVE PULSE 1
	36	O	MICROPROCESSOR ADDRESS 6	70	O	FOCUS DRIVE PULSE 2
	37	O	CHIP SELECT 1	71	O	FOCUS DRIVE PULSE 3
	38	O	CHIP SELECT 2	72	O	FOCUS DRIVE PULSE 4
	39	O	CHIP SELECT 3	73	—	GND
	40	O	MICROPROCESSOR ADDRESS 7	74	—	VDD
CK	41	O	LED CONTROL	75	—	VDD
A	42	O	RAM DUMP SERIAL CLOCK	76	—	VDD
	43	O	RAM DUMP SERIAL DATA	77	I	V REF(H)
	44	—	GND	78	I	VARIAVLE ZOOM
	45	O	ZOOM DRIVE COMPARE PULSE 1	79	I	F VALUE
A	46	O	ZOOM DRIVE COMPARE PULSE 2	80	I	MANUAL FOCUS 1
	47	O	ZOOM DRIVE COMPARE PULSE 3	81	I	MANUAL FOCUS 2
A	48	O	ZOOM DRIVE PULSE 1	82	I	KEY DATA 2
	49	O	ZOOM DRIVE PULSE 2	83	I	KEY DATA 3
CK	50	O	ZOOM DRIVE PULSE 3	84	I	KEY DATA 4
	51	O	ZOOM DRIVE PULSE 4	85	—	
TA 0	52	—		86	—	GND
TA 1	53	O	TIMING GENERATOR SERIAL CLOCK	87	O	EVF IC STROBE(H)
TA 2	54	O	TIMING GENERATOR SERIAL DATA	88	O	H.S.S.CONTROL
TA 3	55	O	TIMING GENERATOR SERIAL LOAD	89	O	LOAD
	56	O	CHARGE STOP SELECT	90	O	CAMERA SERIAL DATA
TA 4	57	—	GND	91	O	CAMERA SERIAL CLOCK
TA 5	58	O	FOCUS DRIVE COMPARE PULSE 1	92	—	GND
TA 6	59	O	FOCUS DRIVE COMPARE PULSE 2	93	I	H SYNC
TA 7	60	O	FOCUS DRIVE COMPARE PULSE 3	94	I	AF/MF SWITCH
DRESS 0	61	—		95	—	VDD
DRESS 1	62	I	VDD	96	I	WIPE
DRESS 2	63	I	RESET	97	I	V SYNC
DRESS 3	64	I	VDD	98	I	BLOCK END IRQ
DRESS 4	65	—	GND	99	—	
DRESS 5	66	—	DOUBLE SAMPLING PULSE 1	100	I	DIS IRQ
	67	—				

IC BLOCK DIAGRAM

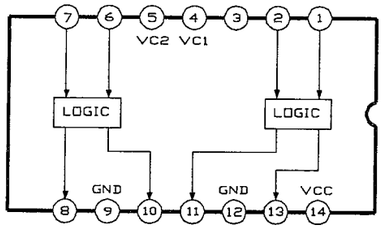
IC307



IC309



IC701
IC702

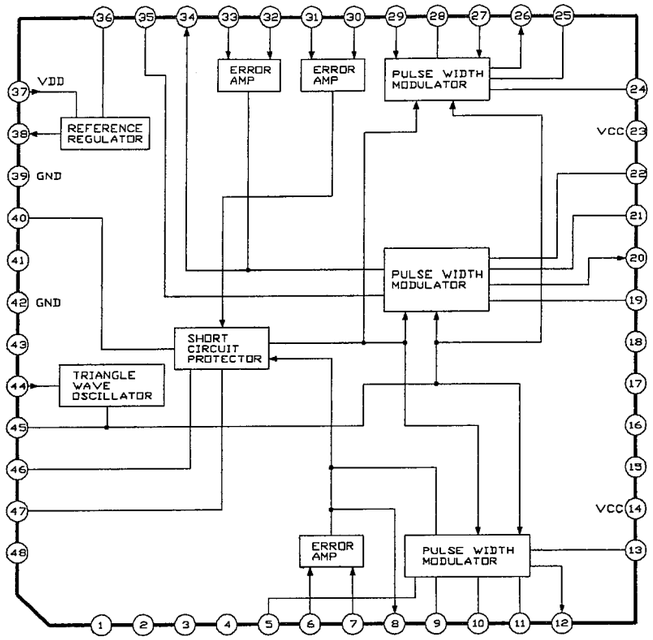


D E F G H I J K L

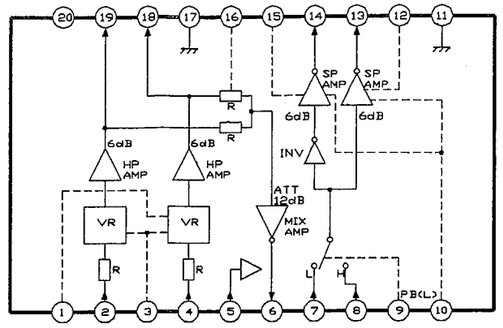
LCD SCHEMATIC DIAGRAM

IC BLOCK DIAGRAM

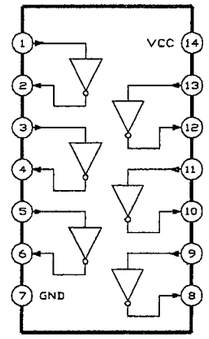
IC1201



IC4401



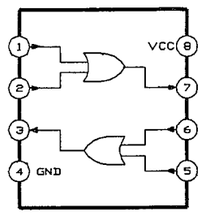
IC9006



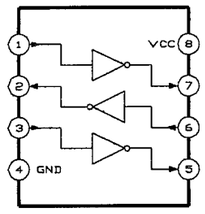
IC9003 SIGNAL NAME

PIN No.	I/O	SIGNAL NAME
IC9003		
1	I	R DATA SELECT SIGNAL
2	I	G DATA SELECT SIGNAL
3	I	B DATA SELECT SIGNAL
4	I	CLAMP SWITCH
5	I	VDD
6	I	V REF
7	—	GND
8	I	R SIGNAL
9	I	G SIGNAL
10	I	B SIGNAL
11	I	R CLAMP
12	I	G CLAMP
13	I	B CLAMP
14	—	GND
15	O	PICTURE DATA 0
16	O	PICTURE DATA 1
17	O	PICTURE DATA 2
18	O	PICTURE DATA 3
19	O	PICTURE DATA 4
20	O	PICTURE DATA 5
21	O	VDD
22	—	GND
23	I	VDD
24	I	CLOCK

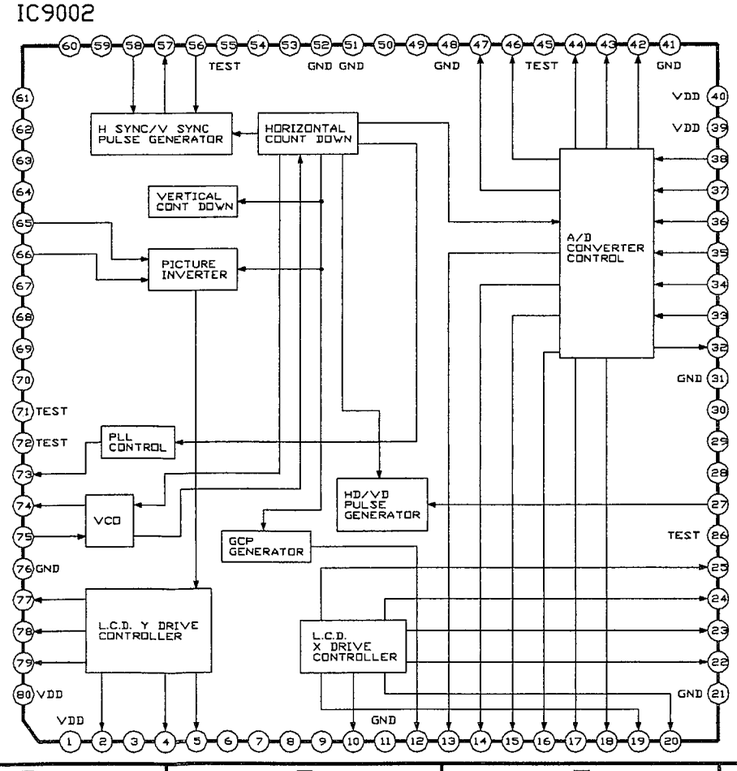
IC9004



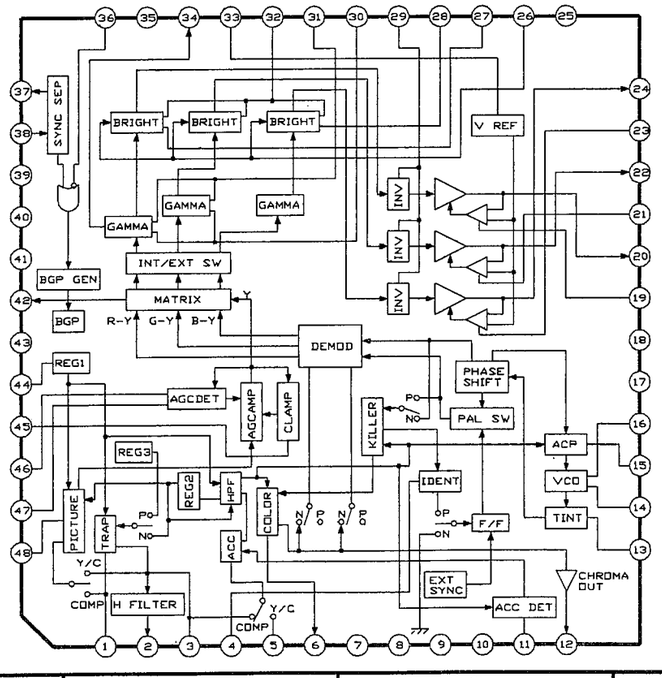
IC9005



IC9002



IC9001



LCD SCHEMATIC DIAGRAM

IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED BY THE ⚠ SYMBOL HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2, REF. NO. 1000 SERIES
SCHEMATIC DIAGRAM...R1202
(R1202 IS ABBREVIATED TO R202)

NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2, REF. NO. 4000 SERIES
SCHEMATIC DIAGRAM...R4402
(R4402 IS ABBREVIATED TO R402)

NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2, REF. NO. 9000 SERIES
SCHEMATIC DIAGRAM...R9002
(R9002 IS ABBREVIATED TO R2)

⇦ AUDIO SIGNAL PATH

⬅ VIDEO SIGNAL PATH

VOLTAGE CHART

MODE / PIN No.	CAMERA	MODE / PIN No.	CAMERA
IC1201		42	0
1	0.8	43	0.9
2	2.3	44	0.9
3	1.9	45	1.6
4	2.1	46	1.6
5	3.0	47	2.3
6	1.2	48	0
7	1.2	IC4401	
8	1.7	1	1.8
9	1.4	2	1.6
10	0.1	3	0
11	6.2	4	1.6
12	6.7	5	1.6
13	3.6	6	1.6
14	6.4	7	1.6
15	6.4	8	1.6
16	6.1	9	4.5
17	6.3	10	3.2
18	0	11	0
19	0.2	12	1.6
20	6.1	13	1.6
21	6.3	14	1.6
22	2.6	15	1.6
23	6.4	16	3.2
24	1.4	17	0
25	5.7	18	1.6
26	5.9	19	1.6
27	0.4	20	2.3
28	0	IC9001	
29	1.4	1	2.3
30	1.2	2	4.2
31	1.2	3	2.4
32	1.2	4	0.6
33	1.2	5	0
34	1.6	6	2.8
35	1.4	7	3.3
36	0	8	0.9
37	6.4	9	0
38	2.4	10	1.9
39	0	11	1.9
40	0	12	2.7
41	2.3	13	2.9

RELAY C.B.A. VEPW1589A1

P2: 1 UNREG, 2 UNREG, 4 GND, 5 GND, 6 3LCD VIDEO OUT, 7 EVF ON(L), 8 REG +4.5V, 9 3LCD PB(-), 10 3LCD AUDIO OUT, 11 AUDIO GND, 12 CLOSE(H), 13 SP(+), 14 SP(-)

P1 TO MAIN C.B.A.: P2-13 UNREG, P2-12 UNREG, P2-10 GND, P2-9 GND, P2-8 GND, P2-7 3LCD VIDEO OUT, P2-6 EVF ON(L), P2-5 REG +4.5V, P2-4 3LCD PB(-), P2-3 3LCD AUDIO OUT, P2-2 AUDIO GND, P2-1 AUDIO GND

SW1 LCD PANEL OPEN/CLOSE

P3 TO SPEKER: 1 SP(+), 2 SP(-)

VR4401 10K VOLUME

R4401 3.3K, R4402 1.8K, R4403 0

JK4401 VJJW0066 EARPHONE JACK

L4401 100, L4402 100

C4401 0.1, C4402 47/6.3V, C4403 150/4V, C4404 0.1, C4406 0.0018, C4407 0.0018, C4408 47/6.3V, C4409 47/6.3V, C4410 0.0047, C4411 0.0047, C4413 0.47, C4414 0.47, C4415 0.47, C4416 10/6.3V, C4417 0.47, C4418 0.47, C4420 0.1, C4421 0.0047, C4423 1, C4424 47/6.3V

IC4401 BA7785FS-E2 (AUDIO AMP)

R4406 22K, R4407 15K, R4410 100, R4411 27K, R4413 3.3K, R4414 10K, R4421 6.8K

VF27

Q1209 2SB1073 +3V REGURATOR

TP1204

R1228 3.3 (1/8W)

L9003 47

TP9001, TP9003, TP9002

R9013 4.7K, R9015 4.7K, R9017 22K, R9173 12K, R9010 56K, R9175 0

VR9001 10K WHITE BALANCE, VR9002 10K WHITE BALANCE, VR9003 10K PEDESTAL LEVEL

C9105 0.01, C9004 0.01

R9014 4.7K, R9016 4.7K, R9018 27K, R9174 33K, R9009 33K

C9002 0.01, C9001 0.01, C9003 0.01, C9006 0.01, C9007 0.01, C9008 0.01, C9106 0.01, C9104 1

R9177 0, R9040 1K, C9009 0.01, R9031 270, C9019 1, VR9004 10K CONTRAST, R9019 15K, R9020 22K, C9010 0.01, C9013 33/10V

L9001 47

IC9001 1R3Y18A (VIDEO SIGNAL PROCESS)

SYNC OUT, SYNC SEP, CONTRAST, VCC1, F ADJ, CLAMP, AGC FILTER, AGC OUT, PICTURE, B OUT, B DC DET, G OUT, G DC DET, R OUT, R DC DET, VEE, GND, VCO OUT, APC FILTER, VCO IN, TINT

R9171 2.7K, R9170 2.2K, C9103 0.1, R9008 2.2K, R9007 2.7K, C9027 0.1, C9107 0.1, R9169 2.2K, R9168 2.7K, R9033 8.2K, R9032 5.6K, C9026 0.01, C9025 0.47, C9044 470P, C9045 390P

R9027 18K, C9017 0.0022, R9030 1M, C9016 1, R9165 1K, R9028 330K, R9026 0, R9036 33K, R9037 39K, R9024 22K, R9035 0, L9002 39, C9012 10/10V, C9015 47P, VR9005 20K, VR9006 10K, R9021 1M, C9011 0.1, C9020 0.047, X9001 VSXV0089 (3.58MHz)

VOLTAGE CHART

MODE		MODE		MODE		MODE		MODE		MODE		MODE		MODE		MODE	
PIN No.	CAMERA	PIN No.	CAMERA	PIN No.	CAMERA	PIN No.	CAMERA	PIN No.	CAMERA	PIN No.	CAMERA	PIN No.	CAMERA	PIN No.	CAMERA	PIN No.	CAMERA
IC1201		42	0	14	4.1	7	2.5	49	0.1	10	3.8	9	-5.2	Q1210		5	0
1	0.8	43	0.9	15	2.5	8	4.9	50	2.5	11	3.9	10	-5.2	1	3.3	6	3.4
2	2.3	44	0.9	16	3.0	9	0	51	0	12	3.8	11	-10.1	2	0	Q9003	
3	1.9	45	1.6	17	0	10	4.9	52	0	13	3.9	12	-10.1	3	0	E	0
4	2.1	46	1.6	18	0	11	0	53	4.9	14	0	13	-5.3	4	1.7	C	4.2
5	3.0	47	2.3	19	2.7	12	0.6	54	4.9	15	1.0	14	-5.2	5	2.4	B	-0.3
6	1.2	48	0	20	3.5	13	3.9	55	5.0	16	0.4	Q1201		Q1211		Q9004	
7	1.2	IC4401		21	2.7	14	4.0	56	0.4	17	0.1	E	0	E	0	E	0
8	1.7	1	1.8	22	3.6	15	4.4	57	0.4	18	0.1	C	6.4	C	0	C	4.2
9	1.4	2	1.6	23	2.6	16	4.8	58	0.6	19	0.1	B	0	B	0.6	B	-0.3
10	0.1	3	0	24	3.9	17	4.9	59	5.0	20	0.1	Q1202		Q1212		Q9005	
11	6.2	4	1.6	25	12.4	18	4.9	60	4.9	21	5.0	E	0	E	0	E	-5.1
12	6.7	5	1.6	26	2.4	19	0	61	4.9	22	0	C	6.4	C	2.0	C	-7.4
13	3.6	6	1.6	27	2.3	20	2.1	62	4.9	23	5.0	B	6.5	B	0.5	B	-5.1
14	6.4	7	1.6	28	0	21	0	63	4.9	24	2.4	Q1203		Q1214		Q9006	
15	6.4	8	1.6	29	2.9	22	0.3	64	4.9	IC9004		E	0	E	0	1	0
16	6.1	9	4.5	30	2.4	23	0.1	65	5.0	1	-7.7	C	0	C	4.7	2	4.6
17	6.3	10	3.2	31	2.4	24	2.5	66	5.0	2	-10.2	B	0.6	B	0.1	3	0
18	0	11	0	32	2.6	25	0	67	0	3	-7.5	Q1204		Q1215		4	-5.2
19	0.2	12	1.6	33	5.7	26	0	68	4.5	4	-10.2	E	0	E	0	5	0.1
20	6.1	13	1.6	34	2.4	27	0	69	0	5	-10.1	C	0	C	0	6	0
21	6.3	14	1.6	35	2.3	28	0	70	0	6	-7.5	B	0.6	B	0	Q9007	
22	2.6	15	1.6	36	4.8	29	0	71	0	7	-7.7	Q1205		Q1216		1	-9.9
23	6.4	16	3.2	37	0.5	30	0	72	0	8	-5.2	E	6.4	E	0	2	0
24	1.4	17	0	38	3.5	31	0	73	2.3	IC9005		C	4.6	C	0	3	0
25	5.7	18	1.6	39	1.8	32	2.4	74	2.5	1	4.9	B	5.9	B	0	4	-9.9
26	5.9	19	1.6	40	1.9	33	1.0	75	2.4	2	2.5	Q1206		Q1217		5	-20.3
27	0.4	20	2.3	41	1.8	34	0.9	76	0	3	2.5	E	6.4	E	4.5	6	-19.8
28	0	IC9001		42	3.0	35	0.5	77	2.5	4	0	C	0	C	4.4	TP1201	4.5
29	1.4	1	2.3	43	4.5	36	0.1	78	2.7	5	2.5	B	6.2	B	3.9	TP1202	5.1
30	1.2	2	4.2	44	1.9	37	0.1	79	3.6	6	2.5	Q1207		Q9001		TP1203	-29.8
31	1.2	3	2.4	45	1.7	38	0.1	80	5.0	7	0	E	6.4	1	-19.9	TP1204	3.3
32	1.2	4	0.6	46	3.2	39	5.0	IC9003		8	5.0	C	0	2	3.0	TP1205	0
33	1.2	5	0	47	2.2	40	5.0	1	1.5	IC9006		B	6.2	3	3.4	TP9001	1.4
34	1.6	6	2.8	48	2.3	41	0	2	1.5	1	-5.3	Q1208		4	-29.2	TP9002	1.5
35	1.4	7	3.3	IC9002		42	1.5	3	1.5	2	-10.2	E	3.9	5	-29.2	TP9003	1.4
36	0	8	0.9	1	5.0	43	1.5	4	0.2	3	-10.2	C	3.2	6	29.8	TP9004	3.9
37	6.4	9	0	2	4.9	44	1.5	5	5.0	4	-5.2	B	3.8	Q9002		TP9005	3.9
38	2.4	10	1.9	3	2.5	45	5.0	6	3.8	5	-6.2	Q1209		1	0	TP9006	3.8
39	0	11	1.9	4	4.7	46	0.2	7	0	6	-10.2	E	3.9	2	2.9	TP9007	0
40	0	12	2.7	5	1.1	47	5.0	8	3.9	7	-10.2	C	3.2	3	3.4		
41	2.3	13	2.9	6	1.1	48	0	9	3.9	8	-10.2	B	3.8	4	29.8		

LCD

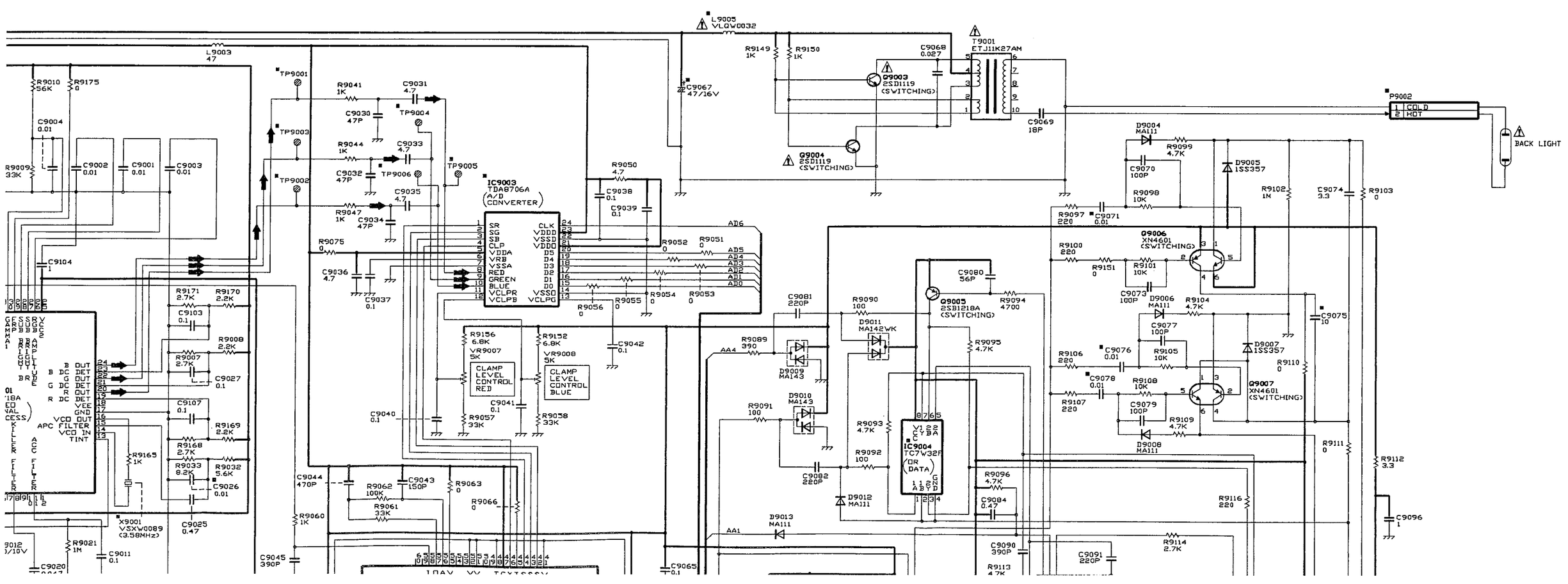
TRANSISTOR	
Q1201	C-4
Q1202	C-4
Q1203	C-4
Q1204	B-4
Q1205	E-4
Q1206	E-3
Q1207	E-3
Q1208	D-5
Q1209	D-5
Q1210	D-5
Q1211	F-1
Q1212	G-1
Q1214	C-4
Q1215	A-1
Q1216	B-1
Q1217	A-2
Q9001	H-3
Q9002	H-3
Q9003	M-8
Q9004	L-8
Q9005	M-7
Q9006	N-7
Q9007	N-6

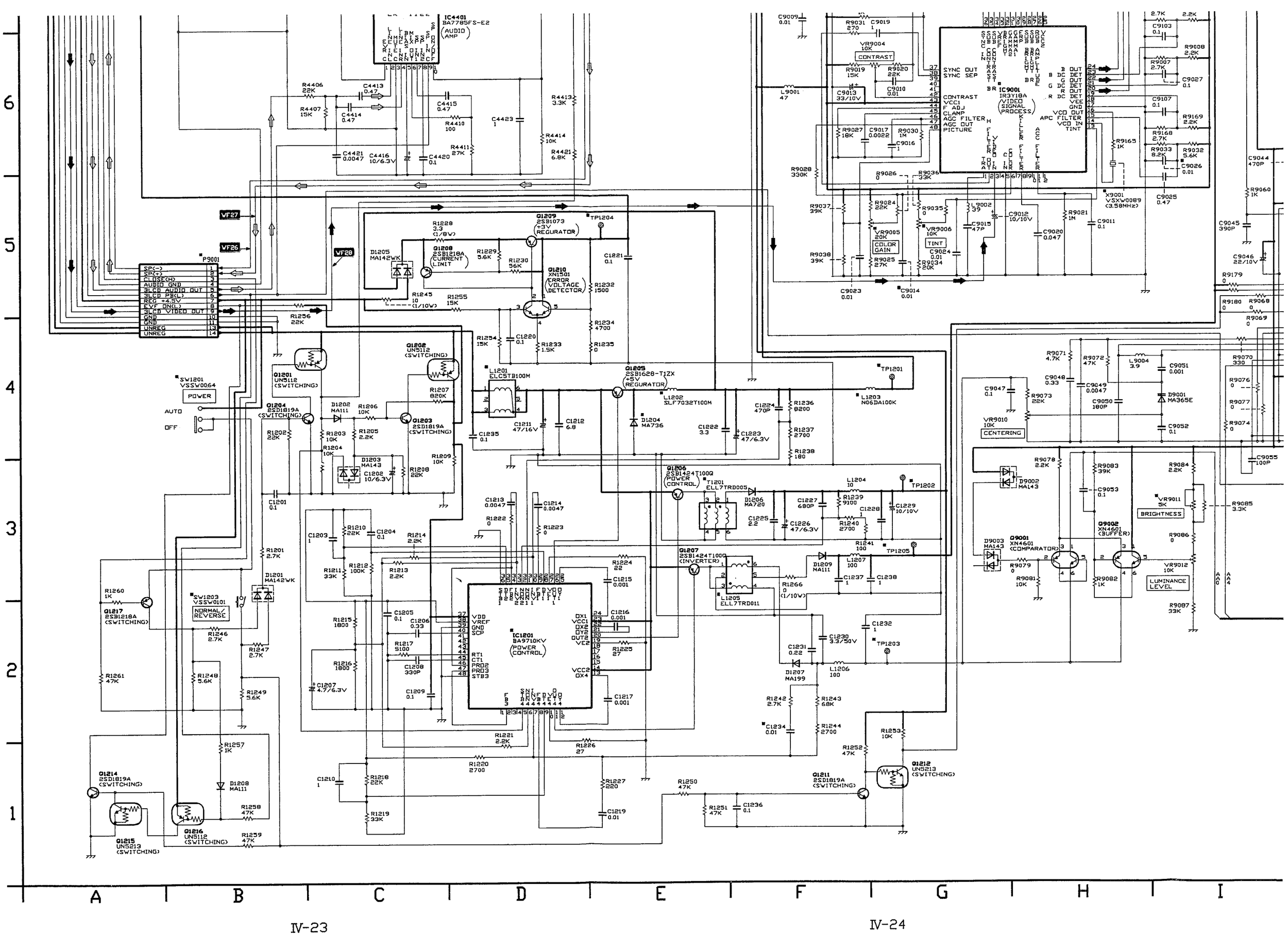
I C	
IC1201	D-2
IC4401	D-6
IC9001	G-6
IC9002	J-5
IC9003	J-7
IC9004	M-6
IC9005	L-5
IC9006	M-5

TEST POINT	
TP1201	G-4
TP1202	G-3
TP1203	G-2
TP1204	E-5
TP1205	G-3
TP9001	I-8
TP9002	I-7
TP9003	I-7
TP9004	J-8
TP9005	J-7
TP9006	J-7
TP9007	K-3

CONNECTOR	
P1	D-9
P2	B-9
P3	B-8
P9001	B-5
P9002	D-8
FP9001	D-5
FP9002	D-3

ADJUSTMENT	
VR4401	B-8
VR9001	F-8
VR9002	G-8
VR9003	G-8
VR9004	F-6
VR9005	F-5
VR9006	G-5
VR9007	J-6
VR9008	K-6
VR9010	G-4
VR9011	H-3
VR9012	I-3




IC4401
BA7785FS-E2
(AUDIO AMP)
P9001
SP(-) 1
SP(+) 2
CLOSE(H) 3
AUDIO GND 4
3LCD AUDIO OUT 5
3LCD PBCL 6
REG +4.5V 7
EVF ON(L) 8
3LCD VIDEO OUT 9
GND 10
GND 11
UNREG 13
UNREG 14
VF27
VF26
VF28
SW1201 VSSW0064
POWER
AUTO
OFF
SW1203 VSSW0101
NORMAL/REVERSE
IC1201
BA9710KV
(POWER CONTROL)
IC9001
IR3Y18A
(VIDEO SIGNAL PROCESS)
X9001
VSXW0089
(3.58MHz)
VR9004 10K
CONTRAST
VR9005 20K
COLOR GAIN
VR9006 10K
TINT
VR9010 10K
CENTERING
VR9011 5K
BRIGHTNESS
VR9012 10K
LUMINANCE LEVEL
Q9001 XN4601 (COMPARATOR)
Q9002 XN4601 (BUFFER)
D9001 MA365E
D9002 MA143
D9003 MA143
Q1201 UN5112 (SWITCHING)
Q1202 UN5112 (SWITCHING)
Q1203 2SD1819A (SWITCHING)
Q1204 2SD1819A (SWITCHING)
Q1205 2SB1628-T1ZX +5V REGURATOR
Q1206 2SB1424T100Q (POWER CONTROL)
Q1207 2SB1424T100Q (INVERTER)
Q1208 2SB1218A (CURRENT LIMIT)
Q1209 2SB1073 +3V REGURATOR
Q1210 XN1501 (ERROR VOLTAGE DETECTOR)
Q1211 2SD1819A (SWITCHING)
Q1212 UN5213 (SWITCHING)
Q1213 UN5213 (SWITCHING)
Q1214 2SD1819A (SWITCHING)
Q1215 UN5213 (SWITCHING)
Q1216 UN5112 (SWITCHING)
Q1217 2SB1218A (SWITCHING)
D1201 MA142WK
D1202 MA111
D1203 MA143
D1204 MA736
D1205 MA142WK
D1206 MA720
D1207 MA199
D1208 MA111
D1209 MA111
L1201 ELCSTB100M
L1202 SLF7032T100M
L1203 NQ6DA100K
L1204 10
L1205 ELL7TRD011
L1206 100
L1207 100
T1201 ELL7TRD005
L9001 47
L9002 39
L9004 3.9
TP1201
TP1202
TP1203
TP1204
TP1205
R1201 2.7K
R1202 22K
R1203 10K
R1204 10K
R1205 2.2K
R1206 10K
R1207 820K
R1208 22K
R1209 10K
R1210 22K
R1211 33K
R1212 100K
R1213 2.2K
R1214 2.2K
R1215 1800
R1216 1800
R1217 5100
R1218 22K
R1219 33K
R1220 2700
R1221 2.2K
R1222 0
R1223 0
R1224 22
R1225 27
R1226 27
R1227 220
R1228 3.3 (1/8W)
R1229 3.6K
R1230 56K
R1231 15K
R1232 1500
R1233 1.5K
R1234 4700
R1235 0
R1236 8200
R1237 2700
R1238 180
R1239 9100
R1240 2700
R1241 100
R1242 2.7K
R1243 68K
R1244 2700
R1245 10 (1/10W)
R1246 2.7K
R1247 2.7K
R1248 5.6K
R1249 5.6K
R1250 47K
R1251 47K
R1252 47K
R1253 10K
R1254 15K
R1255 15K
R1256 22K
R1257 1K
R1258 47K
R1259 47K
R1260 1K
R1261 47K
R1266 0 (1/10W)
R4406 22K
R4407 15K
R4410 100
R4411 27K
R4413 3.3K
R4414 10K
R4421 6.8K
R9001 47
R9005 20K
R9006 10K
R9007 2.7K
R9008 2.2K
R9009 0.01
R9010 0.01
R9013 33/10V
R9015 20K
R9016 1
R9017 0.0022
R9019 15K
R9020 22K
R9021 1M
R9022 22K
R9023 0.01
R9024 22K
R9025 27K
R9026 0
R9027 18K
R9028 330K
R9030 1M
R9031 270
R9032 5.6K
R9033 8.2K
R9034 20K
R9035 0
R9036 33K
R9037 39K
R9038 39K
R9039 39K
R9046 0
R9047 0
R9048 0
R9049 0
R9050 0
R9051 0
R9052 0
R9053 0
R9054 0
R9055 0
R9056 0
R9057 0
R9058 0
R9059 0
R9060 1K
R9061 0
R9062 0
R9063 0
R9064 0
R9065 0
R9066 0
R9067 0
R9068 0
R9069 0
R9070 330
R9071 4.7K
R9072 47K
R9073 22K
R9074 0
R9075 0
R9076 0
R9077 0
R9078 2.2K
R9079 0
R9080 0
R9081 10K
R9082 1K
R9083 39K
R9084 2.2K
R9085 3.3K
R9086 0
R9087 33K
R9088 0
R9089 0
R9090 0
R9091 0
R9092 0
R9093 0
R9094 0
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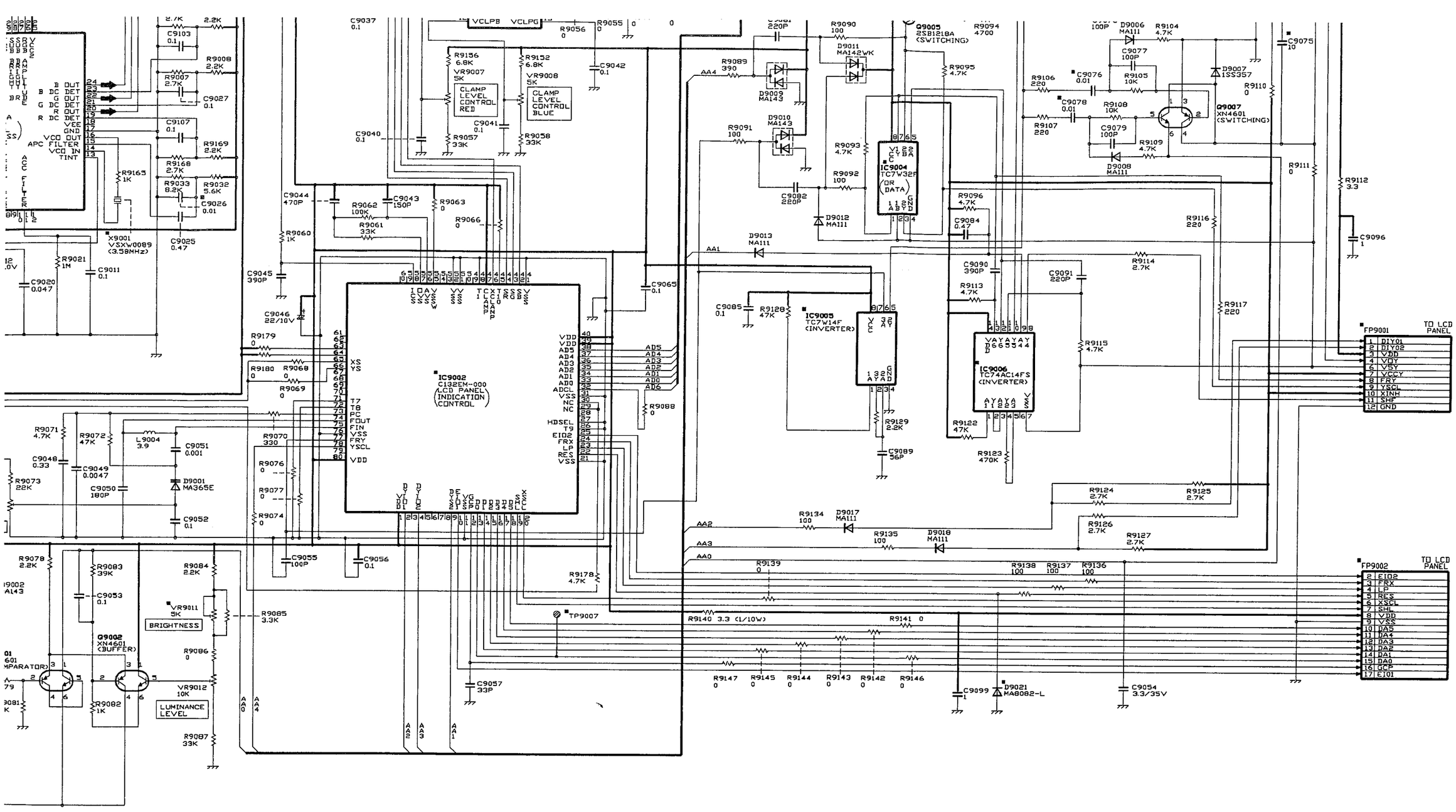
R9157 0
R9158 0
R9159 0
R9160 0
R9161 0
R9162 0
R9163 0
R9164 0
R9165 1K
R9166 0
R9167 0
R9168 2.7K
R9169 2.2K
R9170 0
R9171 0
R9172 0
R9173 0
R9174 0
R9175 0
R9176 0
R9177 0
R9178 0
R9179 0
R9180 0
C1201 0.1
C1202 10/6.3V
C1203 1
C1204 0.1
C1205 0.1
C1206 0.33
C1207 4.7/6.3V
C1208 330P
C1209 0.1
C1210 1
C1211 47/16V
C1212 6.8
C1213 0.0047
C1214 0.0047
C1215 0.001
C1216 0.001
C1217 0.001
C1219 0.01
C1220 0.1
C1221 0.1
C1222 3.3
C1223 47/6.3V
C1224 470P
C1225 2.2
C1226 47/6.3V
C1227 680P
C1228 1
C1229 10/10V
C1230 3.3/50V
C1231 0.22
C1232 1
C1234 0.01
C1235 0.1
C1236 0.1
C1237 1
C1238 1
C4413 0.47
C4414 0.47
C4415 0.47
C4416 10/6.3V
C4420 0.1
C4421 0.0047
C4423 1
C9009 0.01
C9010 0.01
C9011 0.1
C9012 10/10V
C9013 33/10V
C9014 0.01
C9015 47P
C9016 1
C9017 0.0022
C9020 0.047
C9023 0.01
C9024 0.01
C9025 0.47
C9026 0.01
C9027 0.1
C9033 8.2K
C9044 470P
C9045 390P
C9046 22/10V
C9047 0.1
C9048 0.33
C9049 0.0047
C9050 180P
C9051 0.001
C9052 0.1
C9053 0.1
C9055 100P
C9103 0.1
C9107 0.1
C9169 2.2K
C9168 2.7K
C9027 0.1
C9026 0.01
C9025 0.47
C9044 470P
C9045 390P
C9046 22/10V
C9060 1K
C9061 0
C9062 0
C9063 0
C9064 0
C9065 0
C9066 0
C9067 0
C9068 0
C9069 0
C9070 330
C9071 0
C9072 0
C9073 0
C9074 0
C9075 0
C9076 0
C9077 0
C9078 0
C9079 0
C9080 0
C9081 0
C9082 0
C9083 0
C9084 0
C9085 0
C9086 0
C9087 0
C9088 0
C9089 0
C9090 0


IC9002
C132EM-000
LCD PANEL
INDICATION
CONTROL
IC9004
TC7W32F
(OR DATA)
IC9005
TC7W14F
(INVERTER)
IC9006
TC74AC14FS
(INVERTER)
Q9005
2SB1218A
(SWITCHING)
Q9007
XN4601
(SWITCHING)
Q9002
XN4601
(BUFFER)
X9001
VSXW0089
(3.58MHz)
D9001
MA365E
D9002
MA143
D9003
MA143
D9004
MA143
D9005
MA142WK
D9006
MA111
D9007
1SS357
D9008
MA111
D9009
MA143
D9010
MA143
D9011
MA142WK
D9012
MA111
D9013
MA111
D9017
MA111
D9018
MA111
D9021
MA8082-L
VR9007
5K
CLAMP LEVEL CONTROL RED
VR9008
5K
CLAMP LEVEL CONTROL BLUE
VR9011
5K
BRIGHTNESS
VR9012
10K
LUMINANCE LEVEL
TP9007
FP9001
TO LCD PANEL
1 D1Y01
2 D1Y02
3 VDD
4 VDY
5 VSY
6 VCCY
7 FRY
8 YSCL
9 YXINH
10 YSHF
11 GND
12
FP9002
TO LCD PANEL
2 EIO2
3 FRX
4 LP
5 RES
6 XSCL
7 SHL
8 VDD
9 VSS
10 DA5
11 DA4
12 DA3
13 DA2
14 DA1
15 DA0
16 GCP
17 EIO1

H I J K L M N O P

MAIN(SERVO/SYSTEM CONTROL) SCHEMATIC DIAGRAMS

NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2, REF. NO. 6000 SERIES
SCHEMATIC DIAGRAM...R6002
(R6002 IS ABBREVIATED TO R2)

NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2, REF. NO. 2000 SERIES
SCHEMATIC DIAGRAM...R2002
(R2002 IS ABBREVIATED TO R2)

CYLINDER SERVO LOOP

CAPSTAN SERVO LOOP

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-L657	A
PV-L757	B

TO MAIN (AF/PROCESS)

P-3	CAMERA SERIAL CLOCK	15
P-3	CAMERA SERIAL DATA	14
P-3	VCR SERIAL DATA	13

(FOIL CONNECTION)
(AF/PROCESS LOCATION GRID NO.)

TO MAIN (AUDIO)

A-4	AUDIO MUTE (H)	2
A-4	AUDIO DELAY REC (H)	3
A-4	REC/PB CONTROL	5
A-4	CONTROL PULSE (GND)	4
A-4	CONTROL ERASE HEAD GND	6
A-1	MODE SWITCH 1	8
A-1	MODE SWITCH 2	7
A-1	GND	9

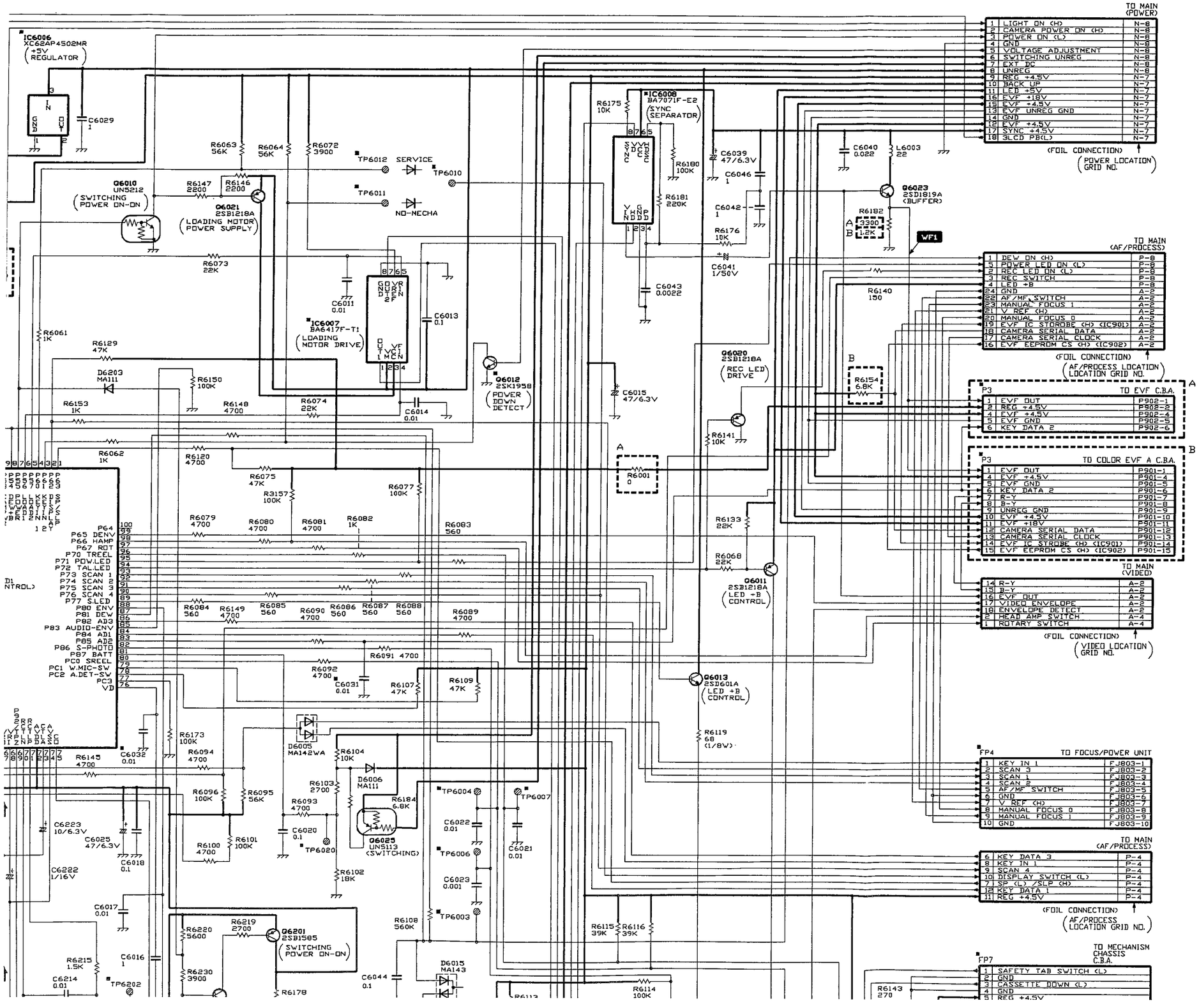
(FOIL CONNECTION)
(AUDIO LOCATION GRID NO.)

TO MAIN (VIDEO)

A-4	VIDEO PB (L)	7
A-4	VIDEO DELAY REC (H)	3
A-4	FLYING ERASE ON (H)	4
A-4	HEAD SWITCH (30HZ)	5
A-4	V LOCK PULSE	6
A-4	VIDEO IC STROBE (H)	10
A-4	D/A DATA	11
A-4	D/A CLOCK	12
A-4	NON REC BLANKING DATA	13
A-4	REC BLANKING DATA	9
A-4	V SYNC(60HZ)	8

(FOIL CONNECTION)
(VIDEO LOCATION GRID NO.)

IC6006 XC62AP4502MR (+5V REGULATOR)
IC6002 S80739SND3T1 (RESET)
C6029 1
Q6010 UN5212 (SWITCHING POWER ON-OFF)
Q6021 2SB1218A (LOADING MOTOR POWER SUPPLY)
D6021 MA165
R6058 1K
R6060 1K
R6174 47K
R6063 56K
R6064 56K
R6147 2200
R6146 2200
R6073 22K
R6179 1K
R6061 1K
R6129 47K
R6056 1K
R6020 1K
C6009 0.1
D6203 MA111
R6150 100K
R6153 1K
R6148 4700
R6074 22K
R6062 1K
R6120 4700
R6075 47K
R3157 100K
R6079 4700
R6080 4700
R6081 4700
R6084 560
R6149 4700
R6085 560
R6090 4700
R6173 100K
R6094 4700
R6096 100K
R6095 56K
R6093 4700
R6100 4700
R6101 100K
C6020 0.1
C6032 0.01
R6145 4700
R6052 1K
R6050 4700
D6011 MA111
R6042 120K
R6048 4700
R6047 4700
R6026 1K
R6025 1K
R6111 4700
R6112 4700
R6053 3300
R6051 1K
R6041 47K
C6206 0.0047
C6205 0.01
R6206 220K
R6207 390K
R6208 220K
C6203 0.001
R6204 180K
C6202 0.0047
R6202 390K
R6203 220K
C6008 10P
X6001 VSXV0086 (8MHZ)
C6007 12P
R6135 0
R6169 47K
C6001 22P
R6011 47K
R6021 1K
TP6203
TP6204
TP6201 TP6014 TP6015
R6009 4700
Q6005 UN5217 (SWITCHING DELAY REC-ON)
Q6004 2SB1218A (SWITCHING DELAY REC-ON)
R6010 4700
Q6008 UN5217 (SWITCHING FLYING ERASE-ON)
R6022 5.6 (1/10W)
IC6001 MN675048A4D1 (SYSTEM CONTROL)
TP6207
TP6210
TP6202
C6211 0.01
C6214 0.01
R6226 0
C6222 1/16V
C6223 10/6.3V
C6025 47/6.3V
C6018 0.1
C6017 0.01
C6016 1
C6219 1
C6207 120P
R6209 2.2M
C6208 0.22
R6215 1.5K
R6219 2700
R6220 5600
Q6201 2SB1585 (SWITCHING POWER
R6230 3900
R6178
R6049 4700
WF19
WF3
WF2
R6029 3300
R6028 3300
R6030 2700
R6027 2700
L6001 100
R6031 1K
R6032 1K
IC6004 UPD6462GS701 (CHARACTER GENERATOR)
R6039 22K
R6040 560
R6038 10K
D6008 MA111
Q6018 2SD1819A (BUFFER)
R6037 1K
IC6005 S3510AEFJTB (CLOCK
R6045 10K
D6001 MA142WK
R6043 47K
R6044 47K
Q6009 2SD1819A (BATTERY CHAGE CONTROL)
TP6021
R6046 1K
D6005 MA142WA



IC6001 KEY MATRIX CHART 1

KEY IN \ SCAN OUT	SCAN 1 (PIN 93)	SCAN 2 (PIN 92)	SCAN 3 (PIN 91)	SCAN 4 (PIN 90)
KEY IN 1 (PIN 56)	POWER SWITCH			EJECT (SW801)
	OFF	CAMERA	VCR	

IC6001 KEY MATRIX CHART 2

VOLTAGE	0～0.45(V)	0.45～1.35(V)	1.35～2.25(V)	2.25～3.15(V)	3.15～4.05(V)
KEY DATA 1 (PIN 84)	CLOCK DOWN (SW818)	CLOCK SET UP (SW817)	TITLE (SW804)	——	——
KEY DATA 2 (PIN 83)	STOP (SW809)	PLAY (SW810)	FF/CUE (SW811)	REW/REVIEW (SW812)	STILL (SW813)
KEY DATA 3 (PIN 86)	LIGHT (SW803)	AUTO LIGHT (SW803)	——	——	——

A-4	D/A CLOCK	11
A-4	NON REC BLANKING DATA	12
A-4	REC BLANKING DATA	13
A-4	V SYNC(60HZ)	8

(FOIL CONNECTION)
(VIDEO LOCATION GRID NO.)

TO MAIN (POWER)

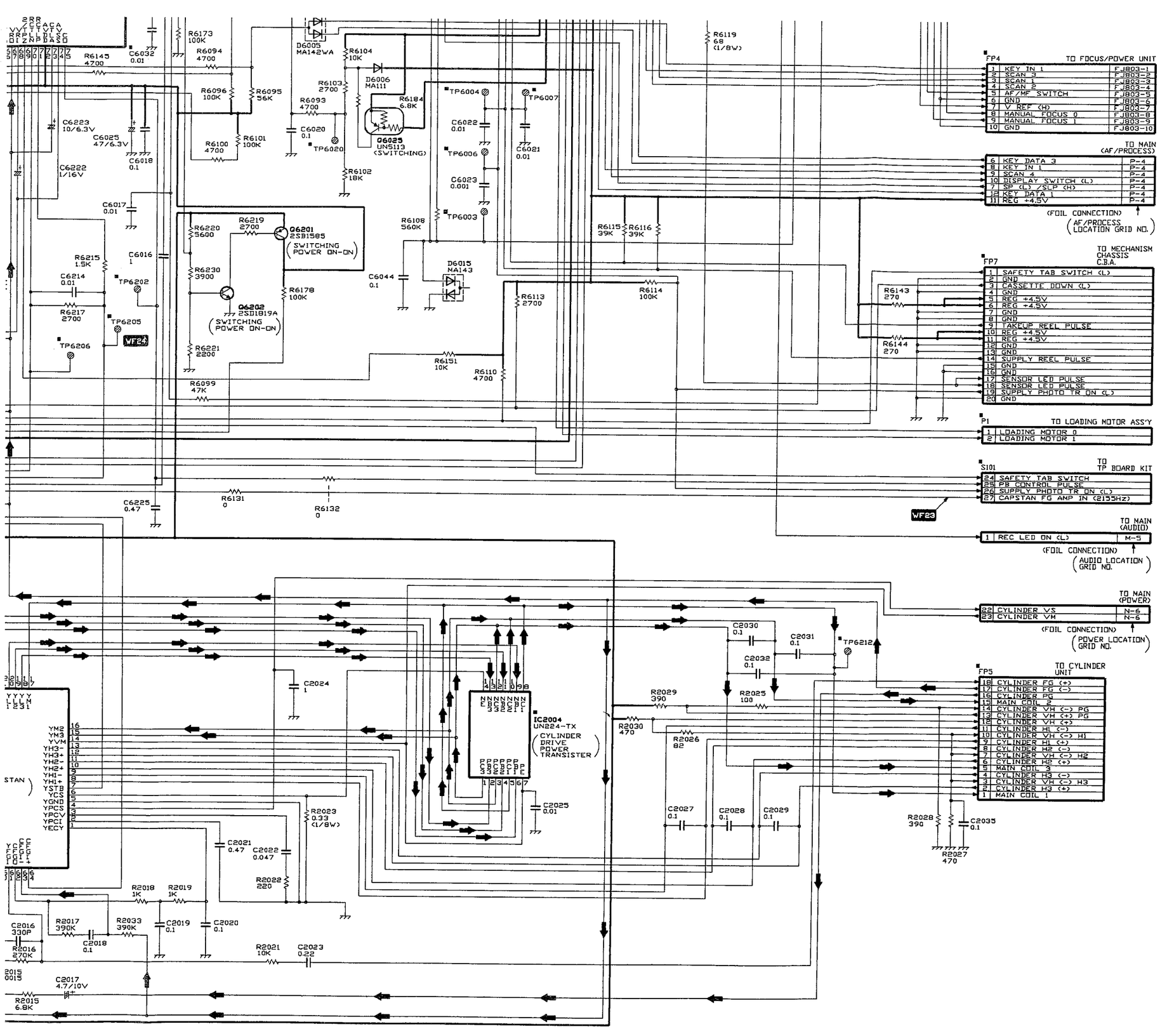
N-7	SERVO REG +4.5V	20
N-7	CAPSTAN SWITCH	21
N-6	TRIANGLE WAVE	24
N-6	CAPSTAN VM	25

(FOIL CONNECTION)
(POWER LOCATION GRID NO.)

TO CAPSTAN ASS'Y — FP2

GND	2
CAPSTAN FG (+)	3
CAPSTAN VMR (+)	4
CAPSTAN VH (-)	5
CAPSTAN VH (-)	6
CAPSTAN H2 (-)	7
CAPSTAN VH (+)	8
CAPSTAN H2 (+)	9
MAIN COIL 3	10
CAPSTAN H1 (-)	11
CAPSTAN VH (+)	12
CAPSTAN H1 (+)	13
MAIN COIL 2	14
CAPSTAN H3 (-)	15
CAPSTAN VH (+)	16
CAPSTAN H3 (+)	17
MAIN COIL 1	18

IC6004 UPD6462GS701 (CHARACTER GENERATOR)
IC6005 S3510AEFJTB (CLOCK IC)
IC2002 UN224-TX (CAPSTAN DRIVE POWER TRANSISTOR)
IC2001 AN3897FH (CYLINDER/CAPSTAN MOTOR DRIVE CONTROL)
Q6009 2SD1819A (BATTERY CHAGE CONTROL)
Q6018 2SD1819A (BUFFER)
Q6022 2SD1819A (INVERTER)
Q6201 2SB1585 (SWITCHING POWER ON-OFF)
Q6202 2SD1819A (SWITCHING POWER ON-ON)
D6001 MA142WK
D6005 MA142WA
D6008 MA111
D6201 MA143
D6250 MA143
X6002 VSXW0084 (32KHZ)



MAIN (SERVO/SYSTEM CONTROL) SECTION

TRANSISTOR	
Q6004	C-8
Q6005	D-8
Q6008	C-7
Q6009	E-6
Q6010	H-10
Q6011	L-7
Q6012	J-8
Q6013	L-7
Q6018	D-5
Q6020	L-9
Q6021	I-9
Q6022	F-4
Q6023	M-10
Q6025	J-6
Q6201	I-5
Q6202	I-5
IC	
IC2001	G-2
IC2002	D-3
IC2004	K-3
IC6001	G-7
IC6002	G-10
IC6004	C-5
IC6005	D-5
IC6006	H-10
IC6007	I-9
IC6008	K-10
CONNECTOR	
FP2	B-3
P3	M-9,M-8
FP4	M-6
FP7	M-5
P1	M-4
S101	M-4
FP5	M-3
TEST POINT	
TP6001	D-4
TP6003	J-6
TP6004	J-6
TP6006	J-6
TP6007	K-6
TP6010	J-10
TP6011	J-10
TP6012	J-10
TP6014	F-9
TP6015	F-9
TP6021	E-5
TP6022	E-5
TP6201	E-9
TP6202	H-5
TP6203	F-9
TP6204	E-8
TP6205	H-5
TP6206	H-5
TP6207	G-6
TP6208	G-5
TP6210	G-5
TP6212	L-3
TP6220	B-3

MAIN(SERVO/SYSTEM CONTROL) SCHEMATIC DIAGRAMS

IC6001 SIGNAL NAME

PIN No.	I/O	SIGNAL NAME	PIN No.	I/O	SIGNAL NAME	PIN No.	I/O	SIGNAL NAME
IC6001			41	O	CYLINDER ON(L)	82	I	SUPPLY PHOTO TR ON(L)
1	I	SP(L)/SLP(H)	42	O	STILL(H)	83	I	KEY DATA 2
2	O	DISPLAY SWITCH(L)	43	O	CAPSTAN REV(H)/STOP(M)/FWD(L)	84	I	KEY DATA 1
3	I	KEY IN 2	44	O	OSD CS(L) (IC6004)	85	—	GND
4	I	KEY IN 1	45	—	———	86	I	KEY DATA 3
5	O	LOAD 2	46	—	———	87	I	DEW(L)
6	O	LOAD 1	47	O	IR REMOTE ON(L)	88	I	VIDEO ENVELOPE
7	O	POWER ON(H)	48	I	SAFETY TAB SWITCH(L)	89	O	SENSOR LED PULSE
8	O	DEW ON(H)	49	I	MODE SWITCH 2	90	O	SCAN 4
9	O	CAMERA POWER ON(H)	50	I	MODE SWITCH 1	91	O	SCAN 3
10	O	LIGHT ON(H)	51	O	VIDEO IC STROBE(H) (IC3001)	92	O	SCAN 2
11	O	AUDIO MUTE(H)	52	—	———	93	O	SCAN 1
12	—	———	53	—	———	94	O	REC LED ON(L)
13	I	CAMERA SERIAL CLOCK	54	—	———	95	I	POWER LED ON(L)
14	I	CAMERA SERIAL DATA	55	I	REC/PAUSE SWITCH(L)	96	I	TAKEUP REEL PULSE
15	O	VCR SERIAL DATA	56	I	KEY IN 3	97	O	ROTARY SWITCH
16	I	SERIAL CLOCK	57	I	CASSETTE DOWN(L)	98	O	HEAD AMP SWITCH
17	I	SERIAL DATA	58	O	AMP OUT	99	I	ENVELOPE DETECT
18	O	SERIAL DATA	59	I	CAPSTAN FG(2155Hz)	100	I	PULL UP
19	—	RESET(L)	60	I	AMP(-)			
20	I	GND	61	I	AMP(+)			
21	O	HEAD SWITCH(30Hz)	62	I	CAPSTAN FG AMP IN(2155Hz)			
22	O	V LOCK PULSE	63	i	CAPSTAN FG AMP OUT(2155Hz)			
23	O	CAPSTAN PHASE CONTROL	64	I	CAPSTAN FG(2155Hz)			
24	O	CAPSTAN SPEED CONTROL	65	I	CYLINDER PG(30Hz)			
25	O	CYLINDER PHASE CONTROL	66	I	CYLINDER FG(180Hz))			
26	O	CYLINDER SPEED CONTROL	67	O	V REF			
27	O	FLYING ERASE ON(H)	68	I	V REF			
28	O	VIDEO/AUDIO DALEY REC(H)	69	I/O	PULL UP			
29	—	———	70	I/O	CONTROL PULSE(GND)			
30	—	———	71	I/O	REC/PB CONTROL			
31	I	CLOCK IN(32KHz)	72	—	VDD			
32	—	VDD	73	I	PB CONTROL PULSE			
33	I	OSC IN(8MHz)	74	—	GND			
34	O	OSC OUT(8MHz)	75	O	PB CONTROL PULSE			
35	—	VDD	76	I	V SYNC(60Hz)			
36	—	———	77	I	GND			
37	O	TIMER CS(H) (IC6005)	78	—	———			
38	—	———	79	—	———			
39	O	VIDEO PB(L)	80	I	SUPPLY REEL PULSE			
40	O	CAPSTAN TORQUE LIMIT(L)	81	I	BATTERY REMAINING			

IC6002 SIGNAL NAME

PIN No.	I/O	SIGNAL NAME
IC6002		
1	O	RESET(L)
2	—	GND
3	—	VDD

IC6005 SIGNAL NAME

PIN No.	I/O	SIGNAL NAME
IC6005		
1	O	BACK UP CLOCK(32KHz)
2	O	OSC OUT(32KHz)
3	I	OSC IN(32KHz)
4	—	GND
5	I	CS
6	I	SERIAL CLOCK
7	I	SERIAL DATA
8	—	VDD

IC6006 SIGNAL NAME

PIN No.	I/O	SIGNAL NAME
IC6006		
1	O	OUT
2	—	GND
3	I	IN

IC6004 SIGNAL NAME

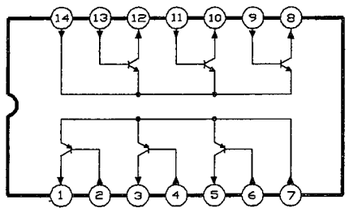
PIN No.	I/O	SIGNAL NAME
IC6004		
1	O	OSD SERIAL CLOCK
2	I	OSD CS(H)
3	—	OSD SERIAL DATA
4	—	POWER ON CLEAR(H)
5	—	VDD
6	—	———
7	O	OSD OUT
8	I	OSD IN
9	—	TEST
10	—	GND
11	O	NON REC BLANKING DATA 1
12	O	NON REC DATA 1
13	O	REC BLANKING DATA 1
14	O	REC DATA 2
15	—	———
16	—	———
17	—	———
18	—	———
19	I	V SYNC
20	I	H SYNC

VOLTAGE CHART

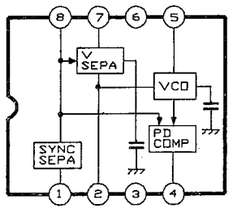
MODE / PIN No.	REC	PLAY
IC2001		
1	2.0	2.0
2	0.6	0.5
3	0.6	0.6
4	2.9	2.9
5	0	0
6	0	0
7	0	0
8	2.2	2.2
9	2.2	2.2
10	2.2	2.2
11	2.2	2.2
12	2.2	2.2
13	2.2	2.2
14	4.4	4.4
15	1.8	1.8
16	1.8	1.8
17	0.3	0.3
18	0.3	0.3
19	0.4	0.3
20	4.1	4.2
21	4.3	4.0
22	4.2	4.0
23	0.4	0.4
24	0.4	0.4
25	0.4	0.4
26	1.5	1.5
27	1.5	1.5
28	1.5	1.5
29	0.8	0.8
30	0.8	0.8
31	0.8	0.8
32	0	1.8

IC BLOCK DIAGRAM

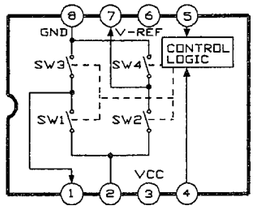
IC2002
IC2004



IC6008



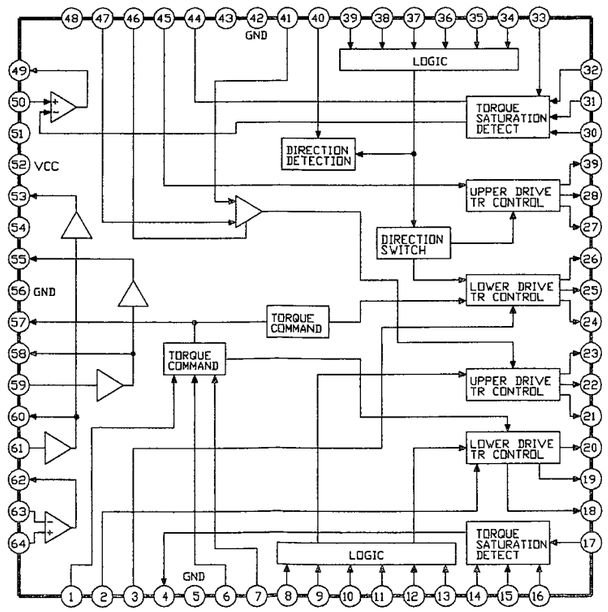
IC6007



IC6007(LOADING DRIVE IC)

	SW1	SW2	SW3	SW4
LOADING	ON	OFF	OFF	ON
UNLOADING	OFF	ON	ON	OFF
BRAKE	ON	ON	OFF	OFF
STOP	OFF	OFF	OFF	OFF

IC2001


48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33
GND
LOGIC
TORQUE SATURATION DETECT
DIRECTION DETECTION
VCC
UPPER DRIVE TR CONTROL
DIRECTION SWITCH
LOWER DRIVE TR CONTROL
GND
TORQUE COMMAND
TORQUE COMMAND
UPPER DRIVE TR CONTROL
LOWER DRIVE TR CONTROL
TORQUE SATURATION DETECT
LOGIC
GND
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64
32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

VOLTAGE CHART(REF. NO.6000 SERIES)

MODE / PIN No.	REC	PLAY	STOP	FF	REW
IC6001					
1	4.4	4.4	4.4	4.4	4.4
2	4.4	4.4	4.4	4.4	4.4
3	4.4	4.4	4.4	4.4	4.4
4	4.4	4.4	4.4	4.4	4.4
5	0	0	0	0	0
6	0	0	0	0	0
7	4.4	4.4	4.4	4.4	4.4
8	4.4	4.4	4.4	4.4	4.4
9	4.4	0	4.4	4.4	4.4
10	0	0	0	0	0
11	0	4.4	0	4.4	4.4
12	0	0	0	0	0
13	4.4	0	4.4	4.4	4.4
14	2.5	0	2.5	2.5	2.5
15	1.5	0	2.0	1.5	1.5
16	4.4	4.4	4.4	4.4	4.4
17	4.1	4.1	4.1	4.1	4.1
18	4.4	4.4	4.4	4.4	4.4
19	4.4	4.4	4.4	4.4	4.4
20	0	0	0	0	0
21	2.2	2.2	2.2	2.2	2.2
22	0	0	0	0	0
23	2.2	2.2	2.2	2.2	2.2
24	2.2	2.2	0	2.2	2.2
25	2.2	2.2	2.2	2.2	2.2
26	2.2	0	2.2	2.2	2.2
27	4.4	0	0	0	0
28	4.4	0	0	0	0
29	0	0	0	0	0
30	2.6	2.6	2.6	26	26
31	1.2	1.1	1.2	1.2	1.2
32	0	0	0	0	0
33	2.2	2.2	2.2	2.2	2.2
34	2.2	2.2	2.2	0	0
35	4.4	4.4	4.5	4.5	4.5
36	0	0	0	0	0
37	0.4	0.4	0.4	0.4	0.4
38	0	0	0	0	0
39	4.1	0.1	4.5	4.5	4.5
40	4.4	4.4	4.4	4.4	4.4
41	0	0	0	0	0
42	0	0	4.3	0	0
43	0	0	2.2	4.4	4.4
44	4.2	4.2	4.2	0	0
45	4.4	4.4	4.5	4.5	4.5
46	0	0	0	0	0
47	4.4	0	4.4	0	0
48	4.1	4.1	4.1	0	0
49	0	4.5	4.5	4.5	4.5
50	0	0	0	0	0

MODE / PIN No.	REC	PLAY	STOP	FF	REW
51	0	0	0	0	0
52	0	0	0	0	0
53	4.4	4.4	4.5	4.5	4.5
54	0	0	0	0	0
55	4.4	4.4	4.4	4.4	4.4
56	4.4.	4.4	4.4	4.4	4.4
57	0	0	0	0	0
58	1.9	1.9	0	1.8	1.8
59	1.9	1.9	0	1.8	1.8
60	2.2	2.1	1.5	1.5	1.5
61	2.2	2.2	0.5	1.3	1.3
62	2.2	2.2	2.2	2.2	2.2
63	2.2	2.2	2.2	2.2	2.2
64	2.2	2.2	2.2	2.2	2.2
65	0.8	0.8	0.8	0.8	0.8
66	2.1	2.1	2.1	2.1	2.1
67	2.2	2.2	2.2	2.2	2.2
68	2.2	0	2.2	2.2	2.2
69	4.4	4.5	4.5	4.5	4.5
70	1.9	2.2	2.2	2.2	2.2
71	2.6	2.2	2.2	2.2	2.2
72	4.4	4.4	4.5	4.5	4.5
73	2.2	2.2	2.2	2.2	2.2
74	0	0	0	0	0
75	2.2	2.2	2.2	2.2	2.2
76	0.8	0.8	0.8	0.8	0.8
77	0	0	0	0	0
78	4.4	4.4	4.4	4.4	4.4
79	4.4	4.4	4.4	4.4	4.4
80	0.2	4.0	4.0	2.5	2.5
81	4.3	4.3	4.3	4.3	4.3
82	4.4	4.4	4.4	4.4	4.4
83	4.5	4.5	4.5	4.5	4.5
84	4.5	4.5	4.5	4.5	4.5
85	0	0	0	0	0
86	4.5	4.5	4.5	4.5	4.5
87	0	0	0	0	0
88	0	2.5	0	0	0
89	0.2	0.2	0.2	0.2	0.2
90	4.4	4.4	4.4	4.4	4.4
91	4.4	4.4	4.4	4.4	4.4
92	4.4	4.4	4.4	4.4	4.4
93	4.4	4.4	4.4	4.4	4.4
94	0	4.4	4.5	4.5	4.5
95	0.2	0.3	0.3	0.3	0.3
96	4.0	4.0	4.0	2.2	2.2
97	2.2	2.2	2.2	2.2	2.2
98	4.4	0	4.5	0	0
99	0	0	0	0	0
100	4.4	4.4	4.5	4.5	4.5

MODE / PIN No.	REC	PLAY	STO
IC6002			
1	4.4	0	4.4
2	4.6	4.6	4.6
3	0	0	0
4	0	0	0
5	4.6	4.6	4.6
6	0	0	0
IC6004			
1	4.4	4.4	4.4
2	4.2	4.2	4.2
3	4.4	4.6	4.4
4	4.4	4.4	4.4
5	4.4	4.5	4.4
6	0	0	0
7	1.7	2.0	1.7
8	1.8	2.0	1.8
9	0	0	0
10	0	0	0
11	0	0	0
12	0	0	0
13	0	0	0
14	0	0	0
15	0	0	0
16	0	0	0
17	0	0	0
18	0	0	0
19	4.2	4.3	4.2
20	3.8	4.0	3.8
IC6005			
1	1.0	1.0	1.0
2	0.8	0.9	0.8
3	0.8	0.9	0.7
4	0	0	0
5	0.4	0.4	0.4
6	4.4	4.4	4.4
7	4.1	0.4	4.1
8	4.1	4.2	4.1
IC6006			
1	4.5	4.5	4.5
2	6.9	7.0	7.0
3	0	0	0
IC6007			
1	1.3	0.8	1.8
2	6.9	7.0	7.0
3	6.9	7.0	7.0
4	0	0	0
5	0	0	0
6	4.5	4.5	4.5
7	1.3	0.7	1.0
8	0	0	0

EMATIC DIAGRAMS

SIGNAL NAME
UPPLY PHOTO TR ON(L)
:Y DATA 2
:Y DATA 1
ND
:Y DATA 3
:W(L)
IDEO ENVELOPE
:NSOR LED PULSE
:AN 4
:AN 3
:AN 2
:AN 1
:C LED ON(L)
)WER LED ON(L)
AKEUP REEL PULSE
ITARY SWITCH
:AD AMP SWITCH
:VELOPE DETECT
LL UP

IC6002 SIGNAL NAME

PIN No.	I/O	SIGNAL NAME
IC6002		
1	O	RESET(L)
2	—	GND
3	—	VDD

IC6004 SIGNAL NAME

PIN No.	I/O	SIGNAL NAME
IC6004		
1	O	OSD SERIAL CLOCK
2	I	OSD CS(H)
3	—	OSD SERIAL DATA
4	—	POWER ON CLEAR(H)
5	—	VDD
6	—	———
7	O	OSD OUT
8	I	OSD IN
9	—	TEST
10	—	GND
11	O	NON REC BLANKING DATA 1
12	O	NON REC DATA 1
13	O	REC BLANKING DATA 1
14	O	REC DATA 2
15	—	———
16	—	———
17	—	———
18	—	———
19	I	V SYNC
20	I	H SYNC

IC6005 SIGNAL NAME

PIN No.	I/O	SIGNAL NAME
IC6005		
1	O	BACK UP CLOCK(32KHz)
2	O	OSC OUT(32KHz)
3	I	OSC IN(32KHz)
4	—	GND
5	I	CS
6	I	SERIAL CLOCK
7	I	SERIAL DATA
8	—	VDD

IC6006 SIGNAL NAME

PIN No.	I/O	SIGNAL NAME
IC6006		
1	O	OUT
2	—	GND
3	I	IN

VOLTAGE CHART(REF. NO.2000 SERIES)

MODE / PIN No.	REC	PLAY
IC2001		
1	2.0	2.0
2	0.6	0.5
3	0.6	0.6
4	2.9	2.9
5	0	0
6	0	0
7	0	0
8	2.2	2.2
9	2.2	2.2
10	2.2	2.2
11	2.2	2.2
12	2.2	2.2
13	2.2	2.2
14	4.4	4.4
15	1.8	1.8
16	1.8	1.8
17	0.3	0.3
18	0.3	0.3
19	0.4	0.3
20	4.1	4.2
21	4.3	4.0
22	4.2	4.0
23	0.4	0.4
24	0.4	0.4
25	0.4	0.4
26	1.5	1.5
27	1.5	1.5
28	1.5	1.5
29	0.8	0.8
30	0.8	0.8
31	0.8	0.8
32	0	1.8

MODE / PIN No.	REC	PLAY
33	1.5	1.5
34	1.5	1.5
35	1.5	1.5
36	1.5	1.5
37	1.5	1.5
38	1.5	1.5
39	1.5	1.5
40	0	0
41	0	0
42	0	0
43	0	0
44	2.3	2.3
45	0.6	0.6
46	0.6	0.6
47	0.2	0.2
48	0	1.9
49	5.2	5.4
50	2.1	2.1
51	0	0
52	4.5	4.5
53	2.1	2.1
54	0	0
55	0.8	0.8
56	0	0
57	2.2	2.2
58	2.2	2.2
59	2.2	2.2
60	2.2	2.2
61	2.2	2.2
62	2.0	2.0
63	2.1	2.1
64	2.2	2.2

MODE / PIN No.	REC	PLAY
IC2002		
1	0.9	0.9
2	2.0	2.2
3	0.9	0.9
4	0.9	2.3
5	0.9	1.0
6	2.0	2.4
7	1.9	2.2
8	0.8	1.0
9	0.4	0.4
10	0.9	1.1
11	0.4	0.4
12	0.9	1.0
13	0.4	0.4
14	0	0
IC2004		
1	1.9	1.9
2	4.2	4.3
3	1.9	1.9
4	4.2	4.4
5	1.9	1.9
6	4.2	4.4
7	4.4	4.5
8	0	1.9
9	0.3	0.4
10	1.9	1.9
11	0.4	0
12	1.9	1.9
13	0	0.4
14	0	0

VOLTAGE CHART(REF. NO.6000 SERIES)

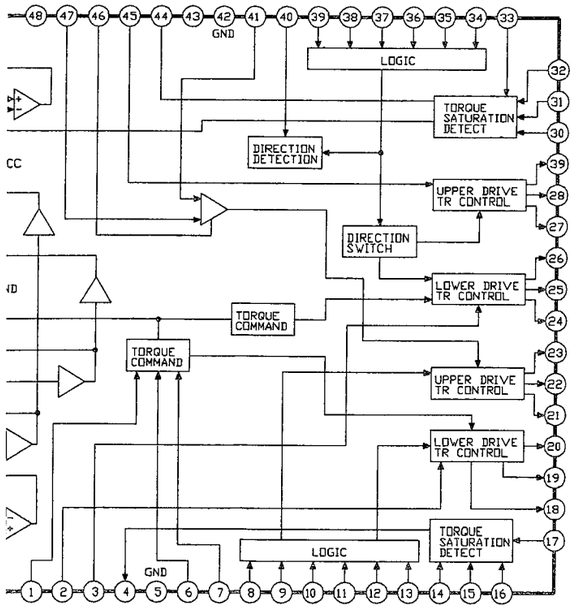
MODE / PIN No.	REC	PLAY	STOP	FF	REW
IC6001					
1	4.4	4.4	4.4	4.4	4.4
2	4.4	4.4	4.4	4.4	4.4
3	4.4	4.4	4.4	4.4	4.4
4	4.4	4.4	4.4	4.4	4.4
5	0	0	0	0	0
6	0	0	0	0	0
7	4.4	4.4	4.4	4.4	4.4
8	4.4	4.4	4.4	4.4	4.4
9	4.4	0	4.4	4.4	4.4
10	0	0	0	0	0
11	0	4.4	0	4.4	4.4
12	0	0	0	0	0
13	4.4	0	4.4	4.4	4.4
14	2.5	0	2.5	2.5	2.5
15	1.5	0	2.0	1.5	1.5
16	4.4	4.4	4.4	4.4	4.4
17	4.1	4.1	4.1	4.1	4.1
18	4.4	4.4	4.4	4.4	4.4
19	4.4	4.4	4.4	4.4	4.4
20	0	0	0	0	0
21	2.2	2.2	2.2	2.2	2.2
22	0	0	0	0	0
23	2.2	2.2	2.2	2.2	2.2
24	2.2	2.2	0	2.2	2.2
25	2.2	2.2	2.2	2.2	2.2
26	2.2	0	2.2	2.2	2.2
27	4.4	0	0	0	0
28	4.4	0	0	0	0
29	0	0	0	0	0
30	2.6	2.6	2.6	26	26
31	1.2	1.1	1.2	1.2	1.2
32	0	0	0	0	0
33	2.2	2.2	2.2	2.2	2.2
34	2.2	2.2	2.2	0	0
35	4.4	4.4	4.5	4.5	4.5
36	0	0	0	0	0
37	0.4	0.4	0.4	0.4	0.4
38	0	0	0	0	0
39	4.1	0.1	4.5	4.5	4.5
40	4.4	4.4	4.4	4.4	4.4
41	0	0	0	0	0
42	0	0	4.3	0	0
43	0	0	2.2	4.4	4.4
44	4.2	4.2	4.2	0	0
45	4.4	4.4	4.5	4.5	4.5
46	0	0	0	0	0
47	4.4	0	4.4	0	0
48	4.1	4.1	4.1	0	0
49	0	4.5	4.5	4.5	4.5
50	0	0	0	0	0

MODE / PIN No.	REC	PLAY	STOP	FF	REW
51	0	0	0	0	0
52	0	0	0	0	0
53	4.4	4.4	4.5	4.5	4.5
54	0	0	0	0	0
55	4.4	4.4	4.4	4.4	4.4
56	4.4	4.4	4.4	4.4	4.4
57	0	0	0	0	0
58	1.9	1.9	0	1.8	1.8
59	1.9	1.9	0	1.8	1.8
60	2.2	2.1	1.5	1.5	1.5
61	2.2	2.2	0.5	1.3	1.3
62	2.2	2.2	2.2	2.2	2.2
63	2.2	2.2	2.2	2.2	2.2
64	2.2	2.2	2.2	2.2	2.2
65	0.8	0.8	0.8	0.8	0.8
66	2.1	2.1	2.1	2.1	2.1
67	2.2	2.2	2.2	2.2	2.2
68	2.2	0	2.2	2.2	2.2
69	4.4	4.5	4.5	4.5	4.5
70	1.9	2.2	2.2	2.2	2.2
71	2.6	2.2	2.2	2.2	2.2
72	4.4	4.4	4.5	4.5	4.5
73	2.2	2.2	2.2	2.2	2.2
74	0	0	0	0	0
75	2.2	2.2	2.2	2.2	2.2
76	0.8	0.8	0.8	0.8	0.8
77	0	0	0	0	0
78	4.4	4.4	4.4	4.4	4.4
79	4.4	4.4	4.4	4.4	4.4
80	0.2	4.0	4.0	2.5	2.5
81	4.3	4.3	4.3	4.3	4.3
82	4.4	4.4	4.4	4.4	4.4
83	4.5	4.5	4.5	4.5	4.5
84	4.5	4.5	4.5	4.5	4.5
85	0	0	0	0	0
86	4.5	4.5	4.5	4.5	4.5
87	0	0	0	0	0
88	0	2.5	0	0	0
89	0.2	0.2	0.2	0.2	0.2
90	4.4	4.4	4.4	4.4	4.4
91	4.4	4.4	4.4	4.4	4.4
92	4.4	4.4	4.4	4.4	4.4
93	4.4	4.4	4.4	4.4	4.4
94	0	4.4	4.5	4.5	4.5
95	0.2	0.3	0.3	0.3	0.3
96	4.0	4.0	4.0	2.2	2.2
97	2.2	2.2	2.2	2.2	2.2
98	4.4	0	4.5	0	0
99	0	0	0	0	0
100	4.4	4.4	4.5	4.5	4.5

MODE / PIN No.	REC	PLAY	STOP	FF	REW
IC6002					
1	4.4	0	4.4	4.5	4.5
2	4.6	4.6	4.6	4.6	4.6
3	0	0	0	0	0
4	0	0	0	0	0
5	4.6	4.6	4.6	4.6	4.6
6	0	0	0	0	0
IC6004					
1	4.4	4.4	4.4	0	0
2	4.2	4.2	4.2	0	0
3	4.4	4.6	4.4	4.5	4.5
4	4.4	4.4	4.4	4.4	4.4
5	4.4	4.5	4.4	4.5	4.5
6	0	0	0	0	0
7	1.7	2.0	1.7	0	0
8	1.8	2.0	1.8	1.9	1.9
9	0	0	0	0	0
10	0	0	0	0	0
11	0	0	0	0	0
12	0	0	0	0	0
13	0	0	0	0	0
14	0	0	0	0	0
15	0	0	0	0	0
16	0	0	0	0	0
17	0	0	0	0	0
18	0	0	0	0	0
19	4.2	4.3	4.2	4.3	4.3
20	3.8	4.0	3.8	3.9	3.9
IC6005					
1	1.0	1.0	1.0	1.2	1.2
2	0.8	0.9	0.8	0.9	0.9
3	0.8	0.9	0.7	0.8	0.8
4	0	0	0	0	0
5	0.4	0.4	0.4	0.4	0.4
6	4.4	4.4	4.4	0	0
7	4.1	0.4	4.1	4.1	4.1
8	4.1	4.2	4.1	4.2	4.2
IC6006					
1	4.5	4.5	4.5	4.5	4.5
2	6.9	7.0	7.0	6.9	6.9
3	0	0	0	0	0
IC6007					
1	1.3	0.8	1.8	1.5	1.5
2	6.9	7.0	7.0	6.9	6.9
3	6.9	7.0	7.0	6.9	6.9
4	0	0	0	0	0
5	0	0	0	0	0
6	4.5	4.5	4.5	4.5	4.5
7	1.3	0.7	1.0	0.8	0.8
8	0	0	0	0	0

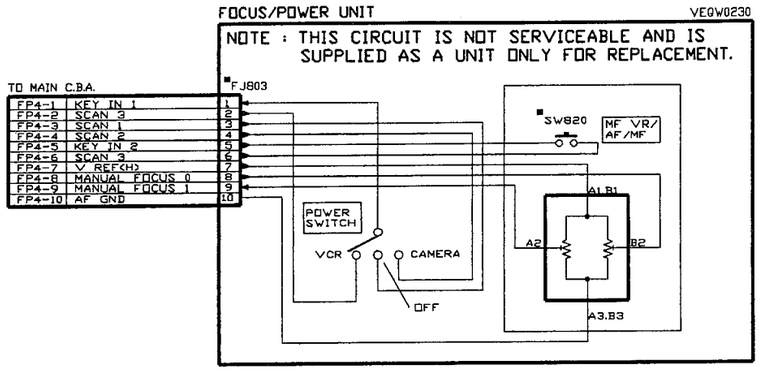
MODE / PIN No.	REC	PLAY	STOP	FF	REW
IC6008					
1	2.3	2.2	2.0	2.1	2.1
2	3.7	3.7	3.7	3.7	3.7
3	0	0	0	0	0
4	2.5	2.5	2.5	2.5	2.5
5	2.2	2.2	2.3	2.3	2.3
6	4.5	4.5	4.5	4.5	4.5
7	4.4	4.4	4.4	4.4	4.4
8	0.6	0.6	0.6	0.6	0.6
Q6004					
E	4.5	4.5	4.5	4.5	4.5
C	4.5	0	0	0	0
B	3.8	4.5	4.5	4.5	4.5
Q6005					
E	0	0	0	0	0
C	0.1	4.5	4.5	4.5	4.5
B	4.4	0	0	0	0
Q6008					
E	0	0	0	0	0
C	0.1	4.5	4.5	4.5	4.5
B	4.4	0	0	0	0
Q6009					
E	4.4	4.4	4.4	4.4	4.4
C	4.1	4.1	4.1	4.1	4.1
B	2.2	0	2.2	2.2	2.2
Q6010					
E	0	0	0	0	0
C	0	0	0	0	0
B	4.4	4.4	4.4	4.4	4.4
Q6011					
E	4.5	4.5	4.5	4.5	4.5
C	0	0	−0.3	0	0
B	3.9	4.5	4.5	4.5	4.5
Q6012					
E	0	0	0	0	0
C	4.4	4.4	4.4	4.4	4.4
B	0	0	0	0	0
Q6013					
E	0.3	0.2	0.3	2.0	2.0
C	6.9	7.0	7.0	6.9	6.9
B	0.1	0	0.2	2.2	2.2
Q6018					
E	0.7	0	0.6	0	0
C	4.1	4.1	4.1	4.2	4.2
B	0.1	0.1	0.1	0.1	0.1
Q6020					
E	0.9	3.5	2.5	3.5	3.5
C	0	0	0	0	0
B	0.3	4.4	4.4	4.4	4.4
Q6021					
E	6.9	7.0	6.9	6.8	6.8

MODE / PIN No.	REC	PLAY	STOP	FF	REW
C	6.8	7.0	6.9	6.8	6.8
B	6.0	6.2	6.1	6.0	6.0
Q6022					
E	0	0	0	0	0
C	0	0	0	0	0
B	0.7	0.6	0.6	0.6	0.6
Q6023					
E	0	0	0	0	0
C	4.5	4.5	4.5	4.5	4.5
B	0	0	0	0	0
Q6024					
E	0	0	0	0	0
C	4.5	4.5	4.5	4.5	4.5
B	0	0	0	0	0
Q6025					
E	6.9	6.9	6.9	6.8	6.8
C	6.8	6.9	6.9	6.8	6.8
B	3.3	3.3	3.3	3.3	3.3
Q6201					
E	4.5	4.5	4.5	4.5	4.5
C	4.4	4.4	4.5	4.5	4.5
B	3.8	0	3.8	3.8	3.8
Q6202					
E	0	0	0	0	0
C	0	0	0	0	0
B	0.6	0.6	0.6	0.6	0.6
TP6001	1.1	0	1.1	1.1	1.1
TP6003	0	0	0	0	0
TP6004	0	0.2	0	1.5	1.5
TP6006	4.5	4.5	4.5	4.5	4.5
TP6007	0	0	4.0	0	0
TP6010	4.4	4.4	4.4	4.4	4.4
TP6011	4.4	4.4	4.4	4.4	4.4
TP6012	4.4	4.4	4.4	4.4	4.4
TP6013	4.4	4.4	4.4	4.4	4.4
TP6014	0	0	0	0	0
TP6020	0	4.3	0	4.3	4.3
TP6021	0.9	0.8	0.9	0.9	0.9
TP6022	0.9	0.8	0.9	0.9	0.9
TP6201	2.2	2.2	2.2	2.2	2.2
TP6202	2.2	2.2	2.2	2.2	2.2
TP6203	2.2	2.2	2.3	0	0
TP6204	2.2	2.2	2.2	2.2	2.2
TP6205	2.0	2.2	2.2	2.2	2.2
TP6206	1.9	2.2	2.2	2.2	2.2
TP6207	2.2	2.2	0	2.2	2.2
TP6208	0.8	0.8	0.9	0.8	0.8
TP6210	2.1	2.1	2.1	2.1	2.1
TP6212	1.9	1.9	1.8	1.9	1.9
TP6220	0.9	0.9	0	2.4	2.4



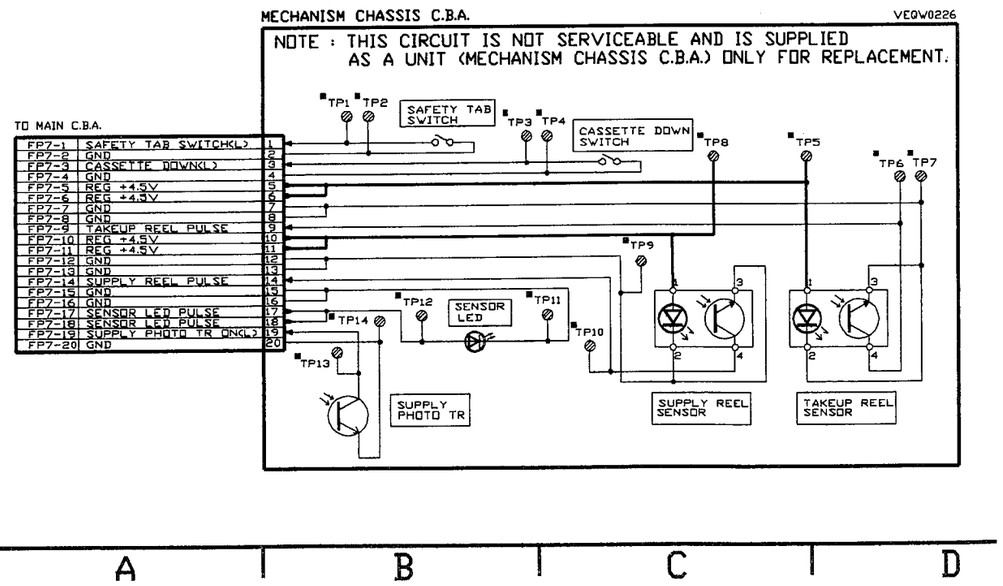
FOCUS/POWER/MECHANISM CHASSIS SCHEMATIC DIAGRAMS

"FOR REFERENCE ONLY"



IC6001 KEY MATRIX CHART 1

KEY IN \ SCAN OUT	SCAN 1 (PIN 93)	SCAN 2 (PIN 92)	SCAN 3 (PIN 91)	SCAN 4 (PIN 90)
KEY IN 1 (PIN 56)	POWER SWITCH			EJECT (SW801)
	OFF	CAMERA	VCR	



BASIC TROUBLESHOOTING FLOW FOR POWER SUPPLY CIRCUIT

① POWER DOES NOT TURN ON.

CHECK POWER ON (L) SIGNAL AT BASE OF Q1001.

RESULT — NO GOOD → CHECK POWER ON (L) SIGNAL AT COLLECTOR OF Q6010 AND POWER ON (H) SIGNAL AT PIN7 OF IC6001.

GOOD

CHECK SWITCHING UNREG AT COLLECTOR OF Q1001.

RESULT — NO GOOD → REPLACE Q1001.

GOOD

CHECK SWITCHING PULSE AT PIN 37 OF IC1001.

RESULT — NO GOOD → REPLACE IC1001.

GOOD

CHECK +4.5V AT (+) SIDE OF C1050.

RESULT — NO GOOD → REPLACE Q1008 , L1002 AND L1005.

GOOD

CHECK IC6001.

② LIGHT UNIT DOES NOT LIGHT UP.

CHECK LIGHT ON (H) SIGNAL AT PIN 10 OF IC6001.

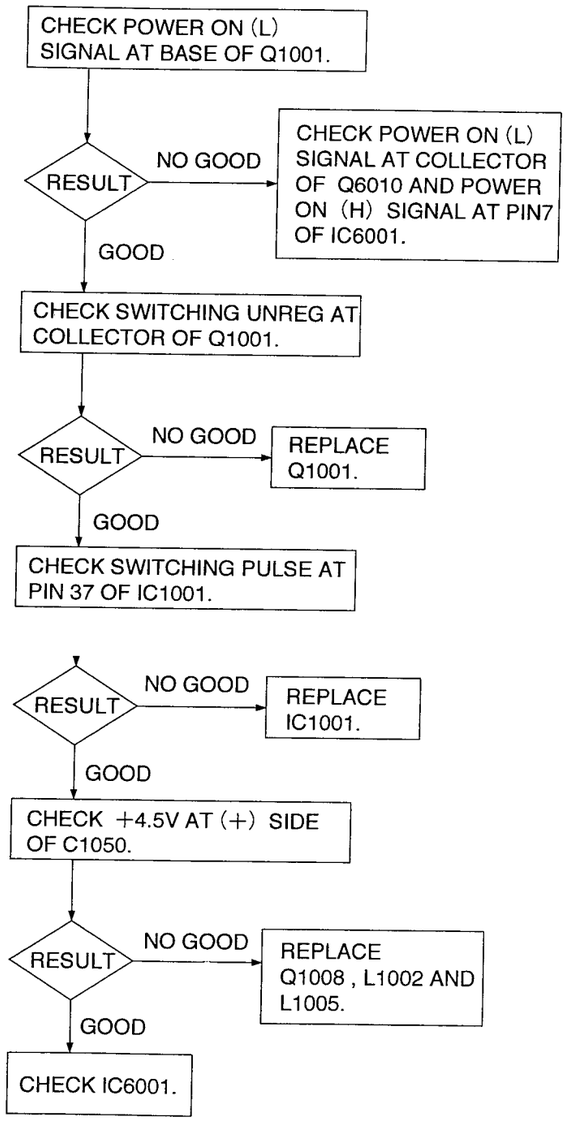
RESULT — NO GOOD → REPLACE Q1103, Q1107.

GOOD

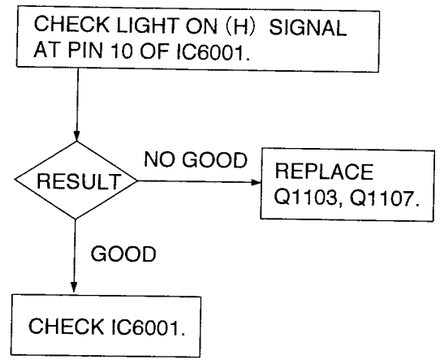
CHECK IC6001.

BASIC TROUBLESHOOTING FLOW FOR POWER SUPPLY CIRCUIT

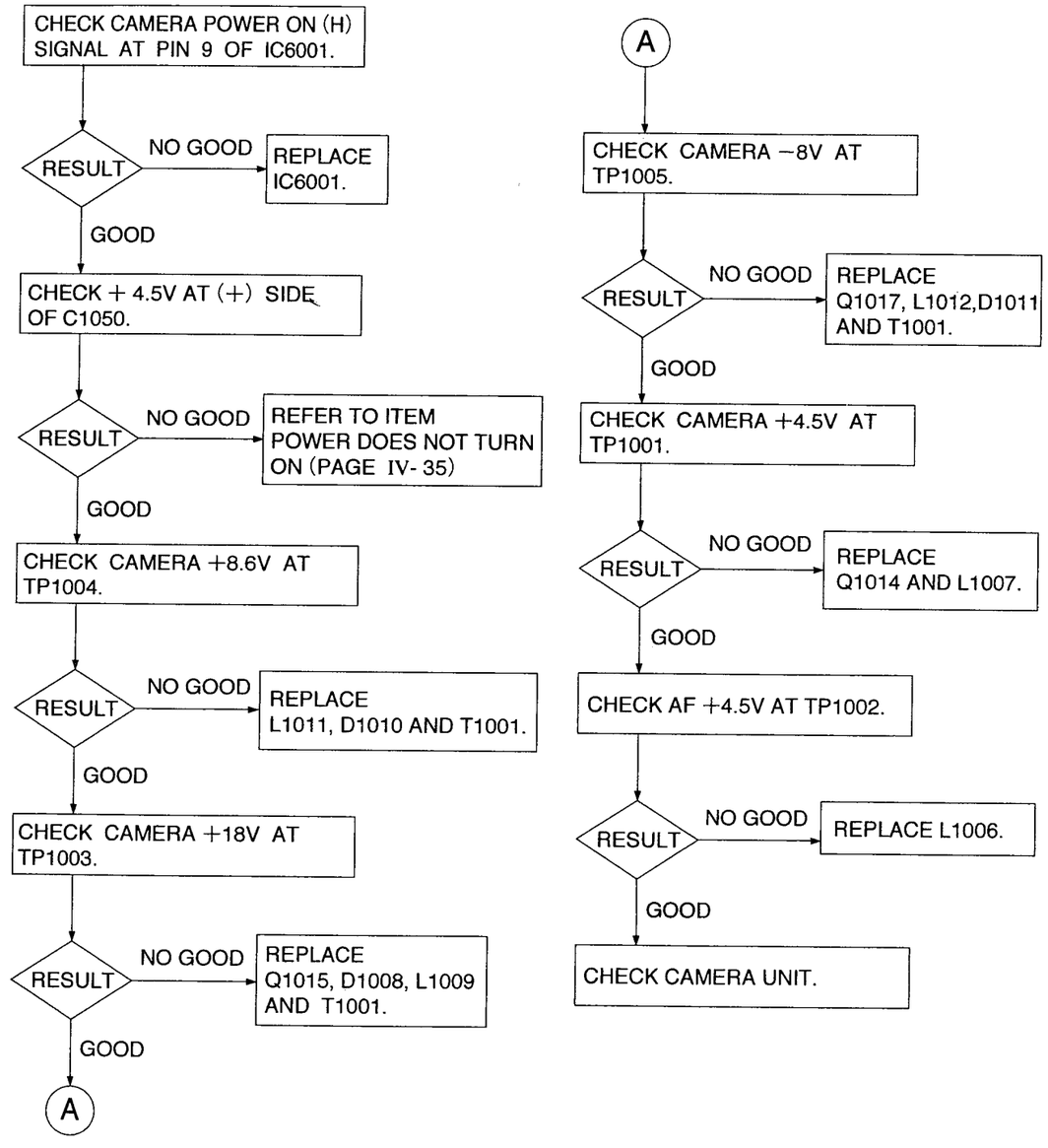
① POWER DOES NOT TURN ON.



② LIGHT UNIT DOES NOT LIGHT UP.



③ UNIT DOES NOT WORK IN CAMERA MODE.



MAIN(POWER SUPPLY) SCHEMATIC DIAGRAM

BATTERY CATCHER UNIT VJHW0053W

"FOR REFERENCE ONLY"

NOTE : THIS CIRCUIT IS NOT SERVICEABLE AND IS SUPPLIED AS A UNIT ONLY FOR REPLACEMENT.

CAUTION : FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE 3.15A 125V FUSE.
ATTENTION : POUR UNE PROTECTION CONTINUE LES RISQUES D' INCEIE N' UTILISER QUE DES FUSIBLE DE MEME TYPE 3.15A 125V

CAUTION : FOR CI
REPLAC
ATTEN
D' INCI
TYPE 1

IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED BY THE ⚠ SYMBOL HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2, REF. NO. 1000 SERIES SCHEMATIC DIAGRAM...R1002
(R1002 IS ABBREVIATED TO R2)

B1: 1 BATT V, 2 UNREG, 3 BACK UP, 4 UNREG GND, 5 VIDEO OUT, 6 GND, 7 AUDIO(L) OUT, 8 RF +4.7V

R2, L1, L2, DC JACK, BATTERY JACK, A/V JACK, D1, D2, D3, D4, D5, C1, R1, COIN BATTERY

TO RELAY C.B.A. P2: P1-13 UNREG, P1-12 UNREG, P1-10 GND, P1-9 GND, P1-8 GND, P1-7 3LCD VIDEO OUT, P1-6 EVF ON(L), P1-5 REG +4.5V, P1-4 3LCD PB (L), P1-3 3LCD AUDIO OUT, P1-2 AUDIO GND, P1-1 AUDIO GND

B2: 1 BATT V, 2 UNREG, 3 BACK UP, 4 UNREG GND, 5 VIDEO OUT, 6 GND, 7 AUDIO(L) OUT, 8 RF +4.7V

D1002 MA3120WA; 16A 24V; F1002 VSFW0008; F1001 VSFW0004; 3.15A 125V; C1062 150P

Q1002 UN5113 (SWITCHING LIGHT ON-ON); D1003 MA111; R1090 100K

Q1001 UN5111 (SWITCHING LIGHT ON-ON)

Q1019 2SB1585 (RF +5V CONTROL); L1013 100; R1065 22K; R1062 1800; D1016 MA111; R1068 0 (1/10W); Q1020 XN4501 ERROR AMP; C1057 1; C1056 0.1; R1063 1800; R1060 3900; R1064 33; R1061 10K; R1004 27K; R1003 10K

L1001 N06DA100K; Q1008 2SB1628 (+5V CONTROL); L1002 ELL04T048R; L1014 10; D1006 MA736; C1020 0.1; C1021 47/16V; C1022 4.7; C1023 3.3

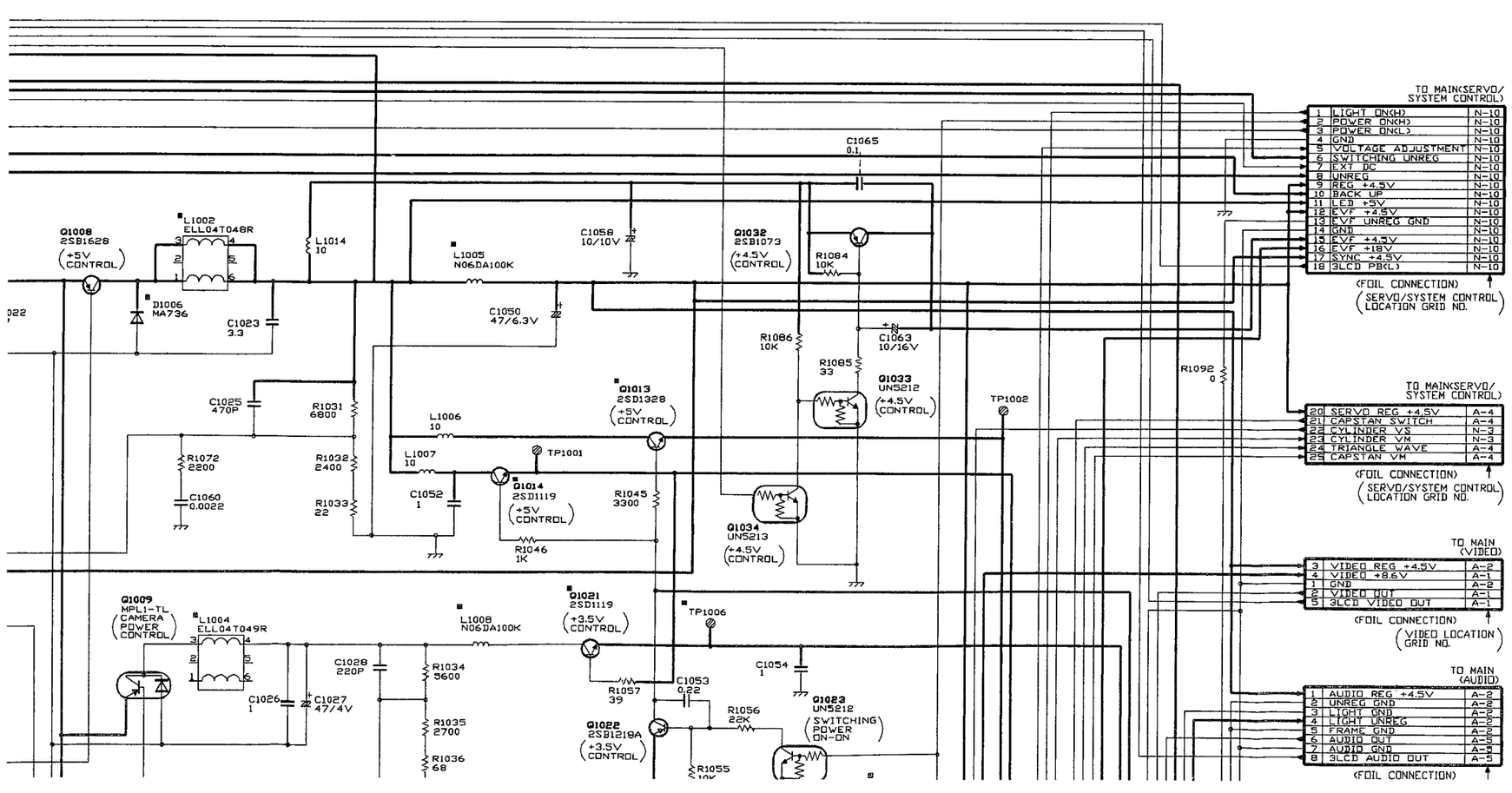
C1025 470P; R1031 6800; L1006 10; R1072 2200; R1032 2400; L1007 10; C1060 0.0022; R1033 22; C1052 1

R1023 1K; Q1007 2SB1218A (INVERTER); D1005 MA111; R1024 100K; C1013 0.01; R1025 10K; C1011 680P; C1012 0.0047; R1020 0; R1021 0; C1002 0.022; C1003 0.022; R1008

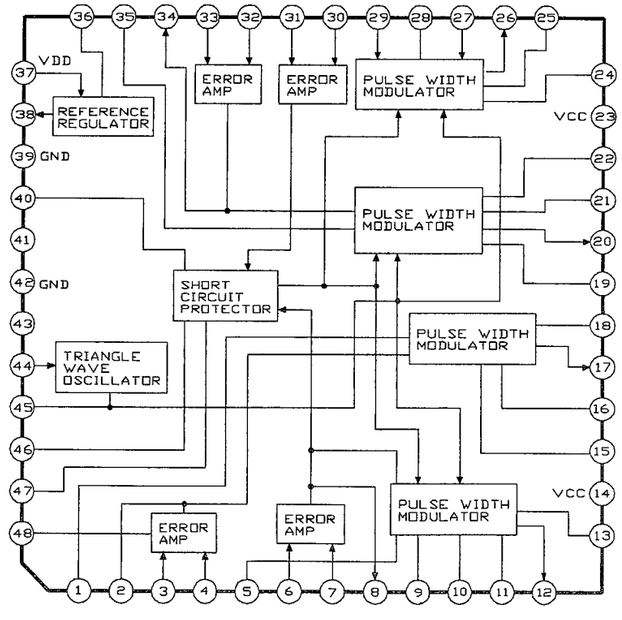
Q1009 MPL1-TL (CAMERA POWER CONTROL); L1004 ELL04T049R; C1028 220P; C1026 1; C1027 47/4V; R1034 3600; R1035 2700; R1036 68

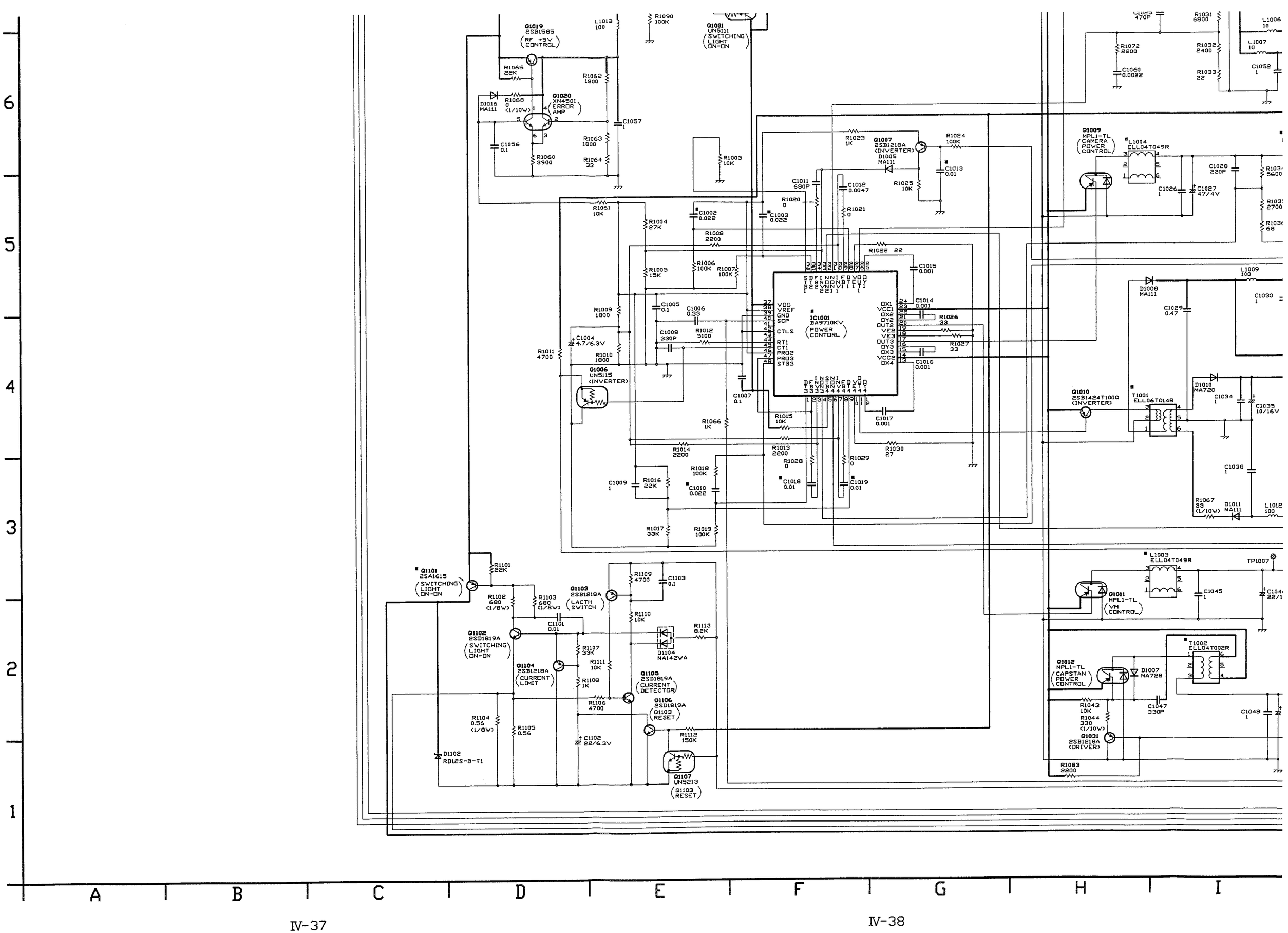
AZARD,
≧5V FUSE.
: LES RISQUES
MEME

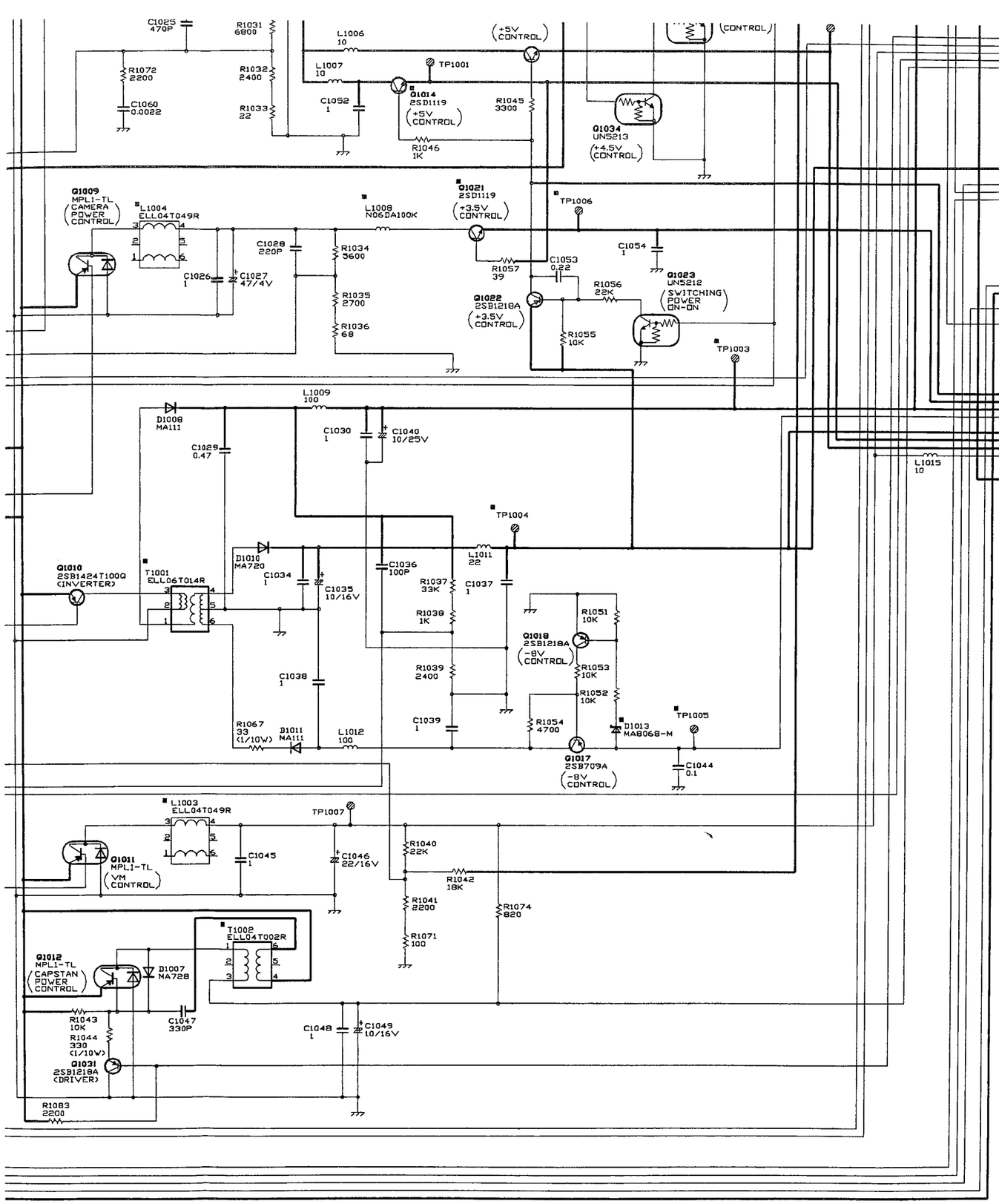
CAUTION : FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 1.6A 24V FUSE.
ATTENTION : POUR UNE PROTECTION CONTINUE LES RISQUES
D' INCEIE N' UTILISER QUE DES FUSIBLE DE MEME
TYPE 1.6A 24V

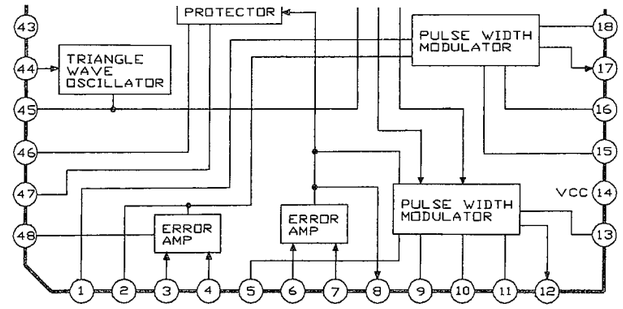


IC BLOCK DIAGRAM
IC1001




Q1019
2SB1585
(RF +5V CONTROL)
L1013
100
R1090
100K
Q1001
UNS111
(SWITCHING LIGHT ON-ON)
R1065
22K
R1062
1800
D1016
MA111
R1068
0
(1/10W)
Q1020
XN4501
(ERROR AMP)
C1057
1
C1056
0.1
R1063
1800
R1060
3900
R1064
33
R1003
10K
R1023
1K
Q1007
2SB1218A
(INVERTER)
R1024
100K
D1005
MA111
C1013
0.01
C1011
680P
C1012
0.0047
R1025
10K
R1020
0
R1021
0
R1061
10K
C1002
0.022
C1003
0.022
R1004
27K
R1008
2200
R1022
22
R1006
100K
R1007
100K
R1005
15K
C1015
0.001
IC1001
BA9710KV
(POWER CONTORL)
C1005
0.1
C1006
0.33
R1009
1800
C1004
4.7/6.3V
C1008
330P
R1012
5100
R1011
4700
R1010
1800
Q1006
UN5115
(INVERTER)
C1007
0.1
R1066
1K
R1015
10K
R1014
2200
R1013
2200
R1028
0
R1029
0
R1018
100K
C1009
1
R1016
22K
C1010
0.022
C1018
0.01
C1019
0.01
R1017
33K
R1019
100K
R1030
27
C1014
0.001
R1026
33
R1027
33
C1016
0.001
C1017
0.001
C1025
470P
R1031
6800
L1006
10
R1072
2200
R1032
2400
L1007
10
C1060
0.0022
R1033
22
C1052
1
Q1009
MPLI-TL
(CAMERA POWER CONTROL)
L1004
ELL04T049R
C1028
220P
C1026
1
C1027
47/4V
D1009
MA111
L1009
100
C1030
1
C1029
0.47
Q1010
2SB1424T100Q
(INVERTER)
T1001
ELL06T014R
D1010
MA720
C1034
1
C1035
10/16V
C1038
1
R1067
33
(1/10W)
D1011
NA111
L1012
100
Q1101
2SA1615
(SWITCHING LIGHT ON-ON)
R1101
22K
R1102
680
(1/8W)
R1103
680
(1/8W)
C1101
0.01
Q1102
2SD1819A
(SWITCHING LIGHT ON-ON)
Q1104
2SB1218A
(CURRENT LIMIT)
Q1103
2SB1218A
(LACTH SWITCH)
R1109
4700
C1103
0.1
R1110
10K
R1113
8.2K
D1104
NA142WA
R1107
33K
R1111
10K
R1108
1K
Q1105
2SD1819A
(CURRENT DETECTOR)
R1106
4700
Q1106
2SD1819A
(Q1103 RESET)
R1104
0.56
(1/8W)
R1105
0.56
C1102
22/6.3V
R1112
150K
D1102
RD12S-B-T1
Q1107
UNS213
(Q1103 RESET)
L1003
ELL04T049R
TP1007
Q1011
MPLI-TL
(VM CONTROL)
C1045
1
T1002
ELL04T002R
Q1012
MPLI-TL
(CAPSTAN POWER CONTROL)
D1007
MA728
C1047
330P
C1048
1
R1043
10K
R1044
330
(1/10W)
Q1031
2SB1218A
(DRIVER)
R1083
2200





VOLTAGE CHART

MODE / PIN No.	REC	PLAY
IC1001		
1	0	0
2	0	0
3	0	0
4	1.1	0
5	6.0	6.1
6	1.1	1.1
7	1.1	1.1
8	1.6	1.6
9	1.4	1.4
10	0.4	0.3
11	6.5	6.6
12	6.7	6.8
13	2.6	2.7
14	6.8	6.9
15	2.2	6.9
16	6.5	6.6
17	6.4	6.8
18	0.3	0
19	0.3	0.3
20	6.3	6.5
21	6.3	6.6
22	1.7	1.8
23	6.8	6.9
24	0	1.7
25	6.2	6.4
26	6.3	0
27	0	0.3
28	0	0
29	1.5	1.5
30	1.1	1.1
31	1.1	1.1
32	0	0.8
33	0.8	0
34	1.5	0
35	0	0
36	0	0
37	6.7	6.7
38	2.3	2.3
39	0	0
40	0	0
41	2.3	2.4
42	0	0
43	0.9	0.9
44	0.9	0.9
45	1.5	0
46	2.3	2.4
47	1.5	2.3
48	4.4	0

MODE / PIN No.	REC	PLAY
Q1001		
E	6.8	7.0
C	6.7	6.9
B	0	0.1
Q1002		
E	0	0
C	3.3	0
B	0	0.5
Q1006		
E	2.2	2.2
C	0	0
B	1.6	1.6
Q1007		
E	2.3	2.3
C	0	0
B	2.9	2.9
Q1008		
E	6.8	6.9
C	4.6	4.6
B	6.3	6.4
Q1009		
E	0	6.9
C	3.6	0.2
B	0	0
Q1010		
E	6.8	6.9
C	0.1	0.1
B	6.4	6.6
Q1011		
E	6.8	6.9
C	4.5	4.5
B	0	0
Q1012		
E	6.8	6.9
C	2.0	2.0
B	0	0
Q1013		
E	4.5	0.5
C	4.5	4.5
B	5.2	0.1
Q1014		
E	4.5	0
C	4.5	4.5
B	5.2	0.2
Q1017		
E	-8.0	-8.0
C	-10.0	-10.0
B	-8.6	-8.6

MODE / PIN No.	REC	PLAY
Q1018		
E	0	0
C	-5.8	-5.9
B	-0.6	-0.6
Q1019		
E	6.8	0
C	0	4.9
B	6.3	6.4
Q1020		
1	6.3	6.4
2	2.5	0
3	1.9	1.9
4	4.9	4.9
5	0	0
6	0	1.9
Q1021		
E	3.6	0
C	3.6	0
B	4.3	0
Q1022		
E	8.7	0
C	8.6	0
B	8.0	10.1
Q1023		
E	0	0
C	0	10.1
B	4.4	0
Q1031		
E	5.5	5.5
C	0	0
B	5.2	5.2
Q1032		
E	4.5	4.5
C	4.5	4.8
B	3.8	3.8
Q1033		
E	0	0
C	0	0
B	4.5	4.5
Q1034		
E	0	0
C	4.5	4.5
B	0	0
Q1101		
E	0	0
C	0.5	0.6
B	6.8	7.0

MODE / PIN No.	REC	PLAY
Q1102		
E	0	0
C	6.9	7.0
B	0	0
Q1103		
E	0	0
C	0	0
B	0	0
Q1104		
E	0	0
C	0	0
B	0	0
Q1105		
E	0	0
C	0	0
B	0	0
Q1106		
E	0	0
C	0	0
B	0.5	0.5
Q1107		
E	0	0
C	0.5	0.5
B	0	0
TP1001	4.5	0
TP1002	4.5	0.5
TP1003	17.8	17.8
TP1004	8.7	10.1
TP1005	-8.0	-8.0
TP1007	3.6	0

MAIN (POWER SUPPLY) SECTION	
TRANSISTOR	
Q1001	E-7
Q1002	E-7
Q1006	E-4
Q1007	G-6
Q1008	H-7
Q1009	H-6
Q1010	H-4
Q1011	H-3
Q1012	H-2
Q1013	J-7
Q1014	J-6
Q1017	I-3
Q1018	I-4
Q1019	D-7
Q1020	D-6
Q1021	J-6
Q1022	J-5
Q1023	K-5
Q1031	H-2
Q1032	K-7
Q1033	K-7
Q1034	K-6
Q1101	C-3
Q1102	D-2
Q1103	D-3
Q1104	D-2
Q1105	E-2
Q1106	E-2
Q1107	E-1
I C	
IC1001	F-5
CONNECTOR	
P2	B-7
P2	B-8
TEST POINT	
TP1001	J-7
TP1002	J-7
TP1003	K-5
TP1004	J-5
TP1005	K-3
TP1006	J-6
TP1007	I-3

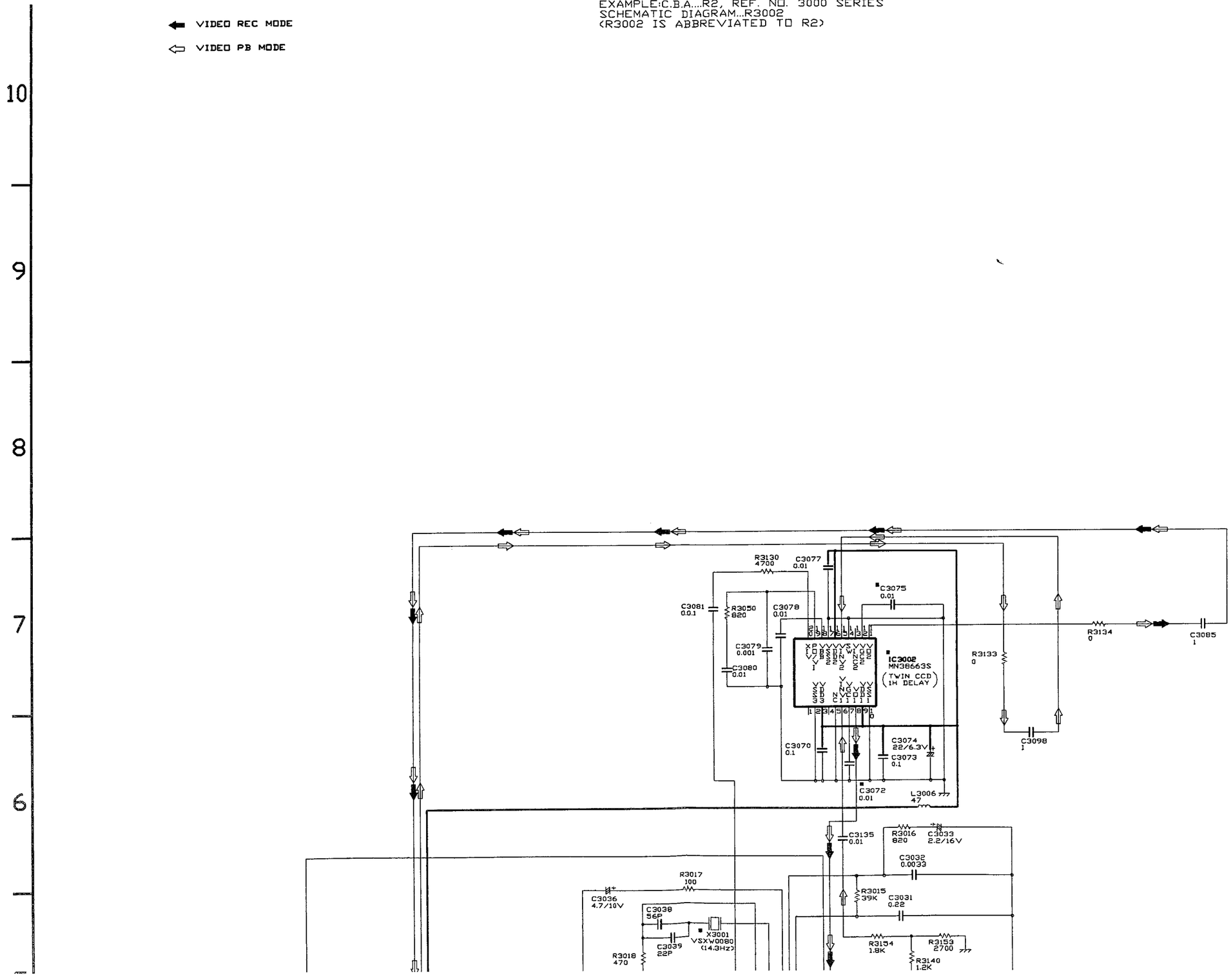
H I J K L M N O P

MAIN〈VIDEO SIGNAL PROCESS〉 SCHEMATIC DIAGRAM

NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2, REF. NO. 3000 SERIES
SCHEMATIC DIAGRAM...R3002
〈R3002 IS ABBREVIATED TO R2〉

⬅ VIDEO REC MODE

⇦ VIDEO PB MODE



VOLTAGE

MODE / PIN No.	REC
IC3001	
1	2.6
2	4.4
3	4.1
4	4.4
5	2.6
6	4.5
7	2.1
8	0
9	2.1
10	2.1
11	0.3
12	0
13	1.4
14	2.0
15	3.5
16	0.4
17	2.0
18	2.0
19	2.5
20	2.1
21	2.1
22	3.0
23	3.5
24	3.2
25	2.5
26	0
27	3.2
28	4.5
29	4.5
30	0
31	2.4
32	3.6
33	0
34	0
35	4.5
36	2.4
37	2.4
38	2.6
39	2.5
40	1.6
41	1.3
42	0.4
43	3.0
44	0
45	0.1
46	3.2
47	3.5
48	1.7
49	2.0

MAIN 〈VIDEO SIGNAL SECTI
TRANSIST
Q3001
Q3003
Q3004
Q3005
Q3007
Q3008
Q3026
I C
IC3001
IC3002
IC3003
CONNEC
S101
FP6
TEST PI
TP3001
TP3002
TP3003
TP3004

VOLTAGE CHART

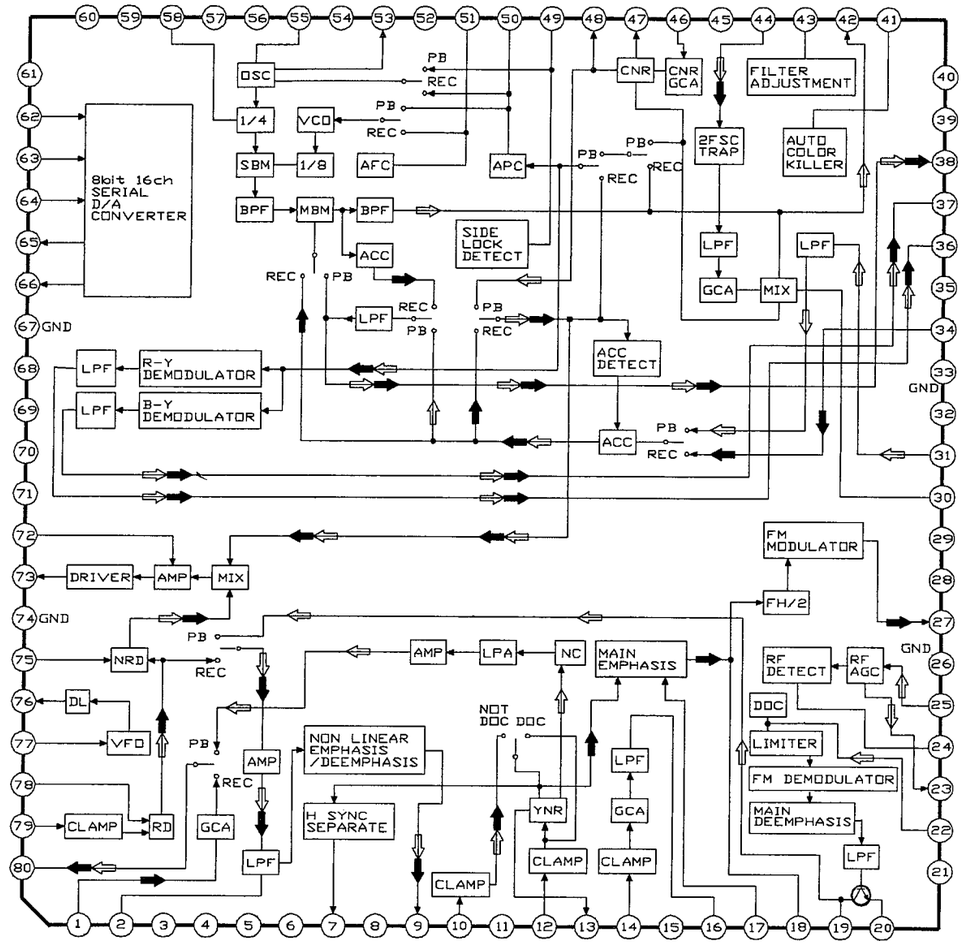
MODE / PIN No.	REC	PLAY
IC3001		
1	2.2	2.4
2	4.4	4.4
3	4.1	0
4	4.4	4.4
5	2.2	2.0
6	4.5	4.4
7	2.1	2.2
8	0	0
9	2.1	1.9
10	2.1	2.1
11	0.3	1.1
12	0	2.1
13	1.4	2.1
14	2.0	2.2
15	3.9	2.5
16	0.4	2.2
17	2.0	2.7
18	2.0	2.8
19	2.5	3.0
20	2.1	1.5
21	2.1	2.6
22	3.0	2.1
23	3.8	2.0
24	3.2	2.9
25	2.8	3.1
26	0	0
27	3.2	3.6
28	4.5	4.4
29	4.5	2.7
30	0	2.1
31	2.4	2.3
32	3.6	3.5
33	0	0
34	0	3.4
35	4.5	4.4
36	2.4	2.4
37	2.4	2.4
38	2.2	0.4
39	2.8	2.7
40	1.6	2.2
41	1.3	1.3
42	0.4	2.2
43	3.0	3.0
44	0	2.9
45	0.1	0.1
46	3.2	2.4
47	3.2	2.9
48	1.7	2.1
49	2.0	2.0

MODE / PIN No.	REC	PLAY
50	2.0	2.0
51	2.0	2.0
52	4.5	4.5
53	2.2	4.4
54	0	0
55	2.8	2.8
56	3.6	3.6
57	4.5	4..4
58	2.9	2.9
59	0	0
60	2.7	2.7
61	0.5	0.4
62	0	0
63	4.5	4.5
64	4.4	4.4
65	0.2	1.8
66	2.0	2.0
67	0	0
68	0	3.6
69	2.1	3.5
70	4.5	4.5
71	4.5	5.0
72	1.6	1.8
73	0	0
74	0	0
75	0.1	0.1
76	0	0
77	0.1	0.1
78	0	0
79	0	2.5
80	2.0	2.3
IC3002		
1	2.1	2.0
2	0	0
3	4.4	4.5
4	2.6	2.7
5	0	0
6	2.4	2.4
7	0	1.9
8	2.5	2.5
9	0	4.6
10	0	0
11	0	0
12	2.4	2.4
13	2.6	2.6
14	0	0
15	2.2	2.5
16	0	4.6
17	0	0
18	-2.3	-2.4

MODE / PIN No.	REC	PLAY
19	2.3	2.3
20	0	2.1
IC3003		
1	2.3	2.2
2	4.3	0
3	0	2.9
4	0	0
5	0	0
6	0	0
7	0.3	2.9
8	0	0
9	0	0
10	0.3	1.4
11	0	0.6
12	0	0
13	0	0.6
14	0.3	1.4
15	4.3	0
16	4.3	0.4
17	4.6	0
18	8.4	8.6
19	0	0
20	1.9	3.9
21	0	0.2
22	0	0
23	1.8	0
24	0.3	4.4
25	4.1	4.2
26	0	0
27	0	0
28	0	0
29	0	0
30	0.3	4.0
31	4.1	0
32	0.3	2.4
33	0.3	2.8
34	4.5	0
35	0	0
36	0.3	0

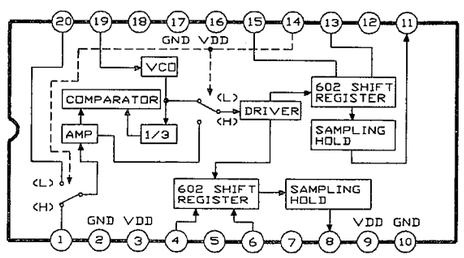
MODE / PIN No.	REC	PLAY
Q3001		
E	4.5	4.5
C	0.2	4.4
B	4.4	3.8
Q3003		
E	0.3	2.5
C	0	1.5
B	3.8	1.9
Q3004		
E	0	1.8
C	0.3	3.7
B	0.3	2.5
Q3005		
E	0	3.1
C	0.3	4.4
B	0.3	0
Q3007		
1	8.4	8.8
2	4.2	0
3	3.6	0
4	8.4	8.8
5	4.2	0
6	3.6	0
Q3008		
E	0	0
C	4.2	0
B	0.3	0.7
Q3026		
E	0	0
C	0	0
B	0	0
TP3001	2.6	2.6
TP3002	2.6	2.6
TP3003	0.2	1.8
TP3004	2.8	2.9

IC BLOCK DIAGRAM
IC3001

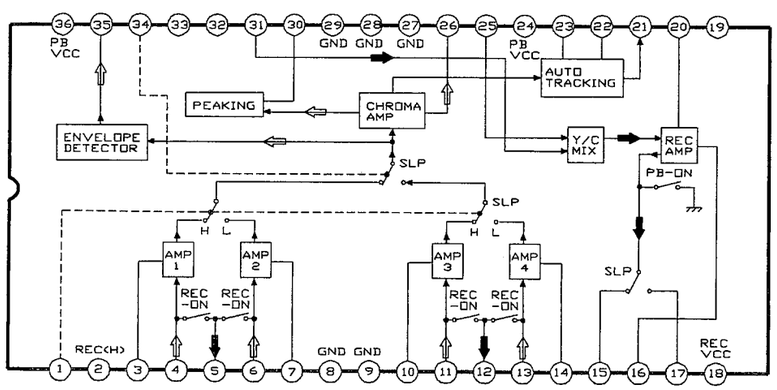


MAIN (VIDEO SIGNAL PROCESS) SECTION	
TRANSISTOR	
Q3001	J-4
Q3003	G-2
Q3004	H-2
Q3005	H-2
Q3007	L-4
Q3008	L-3
Q3026	C-2
I C	
IC3001	E-4
IC3002	E-7
IC3003	K-4
CONNECTOR	
S101	M-4
FP6	M-3
TEST POINT	
TP3001	D-5
TP3002	F-4
TP3003	D-5
TP3004	D-5

IC3002



IC3003



TRANSISTI
Q3001
Q3003
Q3004
Q3005
Q3007
Q3008
Q3026
I C
IC3001
IC3002
IC3003
CONNEC
S101
FP6
TEST PO
TP3001
TP3002
TP3003
TP3004

TO MAIN(SERVO/ SYSTEM CONTROL)
N-7 ROTARY SWITCH 1
N-7 HEAD AMP SWITCH 2
A-7 VIDEO DALEY REC (H) 3
A-7 FLYING ERASE ON (H) 4
A-7 HEAD SWITCH (30HZ) 5
A-7 V LOCK PULSE 6
A-7 VIDEO PB (L) 7
A-7 V SYNC (60HZ) 8
A-7 VIDEO IC STROBE (H) 9
A-7 D/A DATA 10
A-7 D/A CLOCK 11
A-7 NON REC BLANKING DATA 12
A-7 REC BLANKING DATA 13
(FOIL CONNECTION)
(SERVO/SYSTEM CONTROL LOCATION GRID NO.)

TO MAIN (AF/PROCESS)
P-1 LUMA OUT 1
P-1 CHROMA OUT 2
(FOIL CONNECTION)
(AF/PROCESS LOCATION GRID NO.)

TO MAIN (AUDIO)
A-3 AUDIO EE (H) 1
A-3 SLP (H) 2
A-3 AUDIO FADE CONTROL (H) 3
(FOIL CONNECTION)
(AUDIO LOCATION GRID NO.)

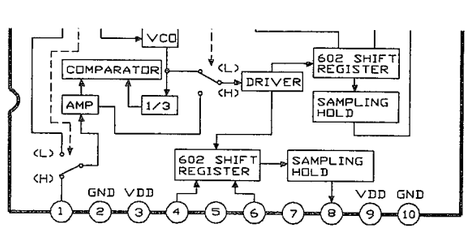
TO MAIN(SERVO/ SYSTEM CONTROL)
N-7 R-Y 14
N-7 B-Y 15
N-7 EVF OUT 16
N-7 VIDEO ENVELOPE 17
N-7 ENVELOPR DETECT 18
(FOIL CONNECTION)
(SERVO/SYSTEM CONTROL LOCATION GRID NO.)

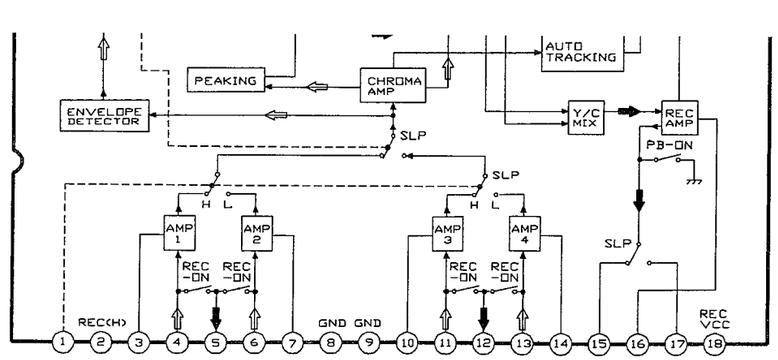
TO MAIN (POWER)
N-6 GND 1
N-6 VIDEO OUT 2
N-6 VIDEO REG +4.5V 3
N-6 VIDEO +8.6V 4
N-6 3LCD VIDEO OUT 5
(FOIL CONNECTION)
(POWER LOCATION GRID NO.)

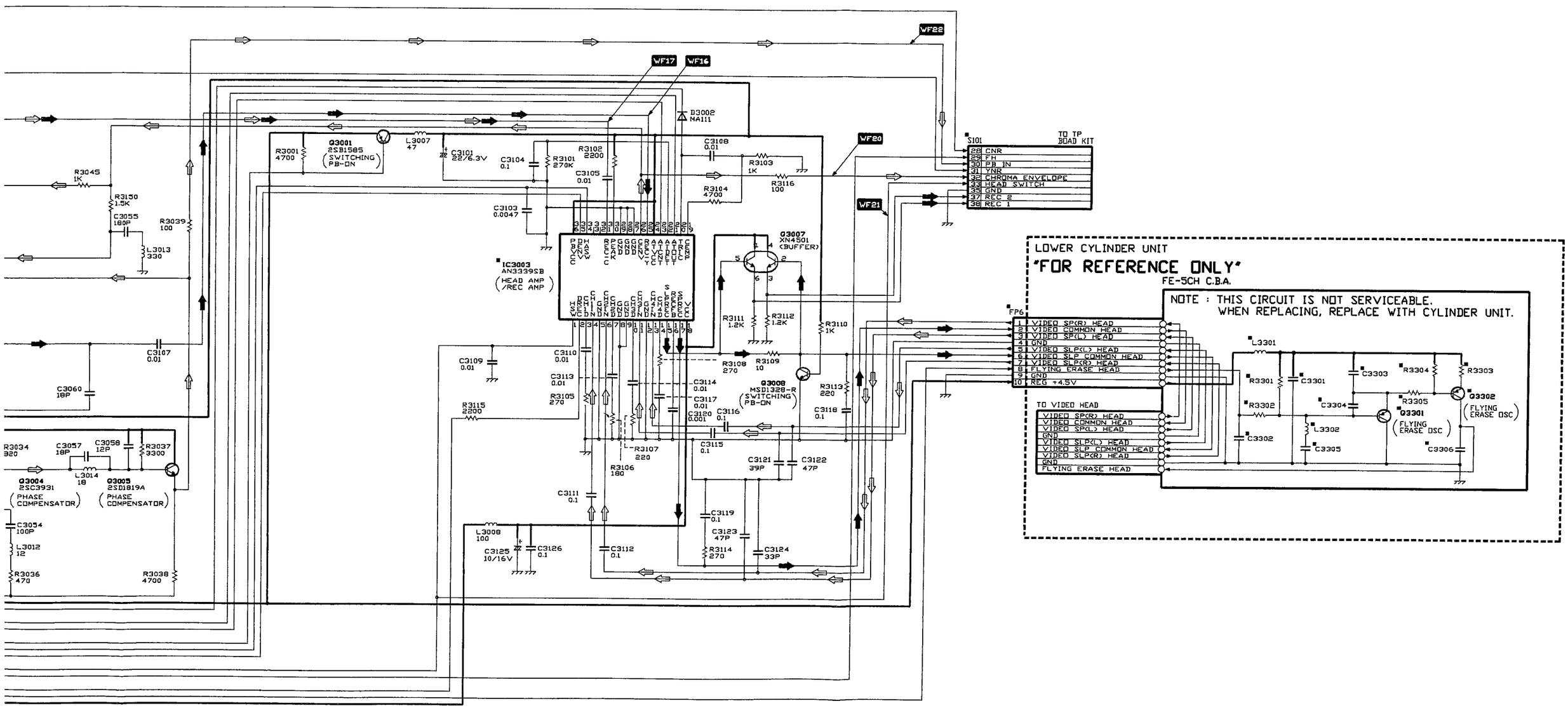
IC3001 AN2401NFH (LUMINANCE /CHROMINANCE REC/PB PROCESS)

Q3026 2SB1218A (BUFFER)
Q3003 2SB1218A (BUFFER)
Q3004 2SC3931 (PHASE COMPENSATOR)
Q3005 2SD1819A (PHASE COMPENSATOR)

SECTION	
TRANSISTOR	
Q3001	J-4
Q3003	G-2
Q3004	H-2
Q3005	H-2
Q3007	L-4
Q3008	L-3
Q3026	C-2
I C	
IC3001	E-4
IC3002	E-7
IC3003	K-4
CONNECTOR	
S101	M-4
FP6	M-3
TEST POINT	
TP3001	D-5
TP3002	F-4
TP3003	D-5
TP3004	D-5







H I J K L M N O P

MIC SCHEMATIC DIAGRAM

"FOR REFERENCE ONLY"

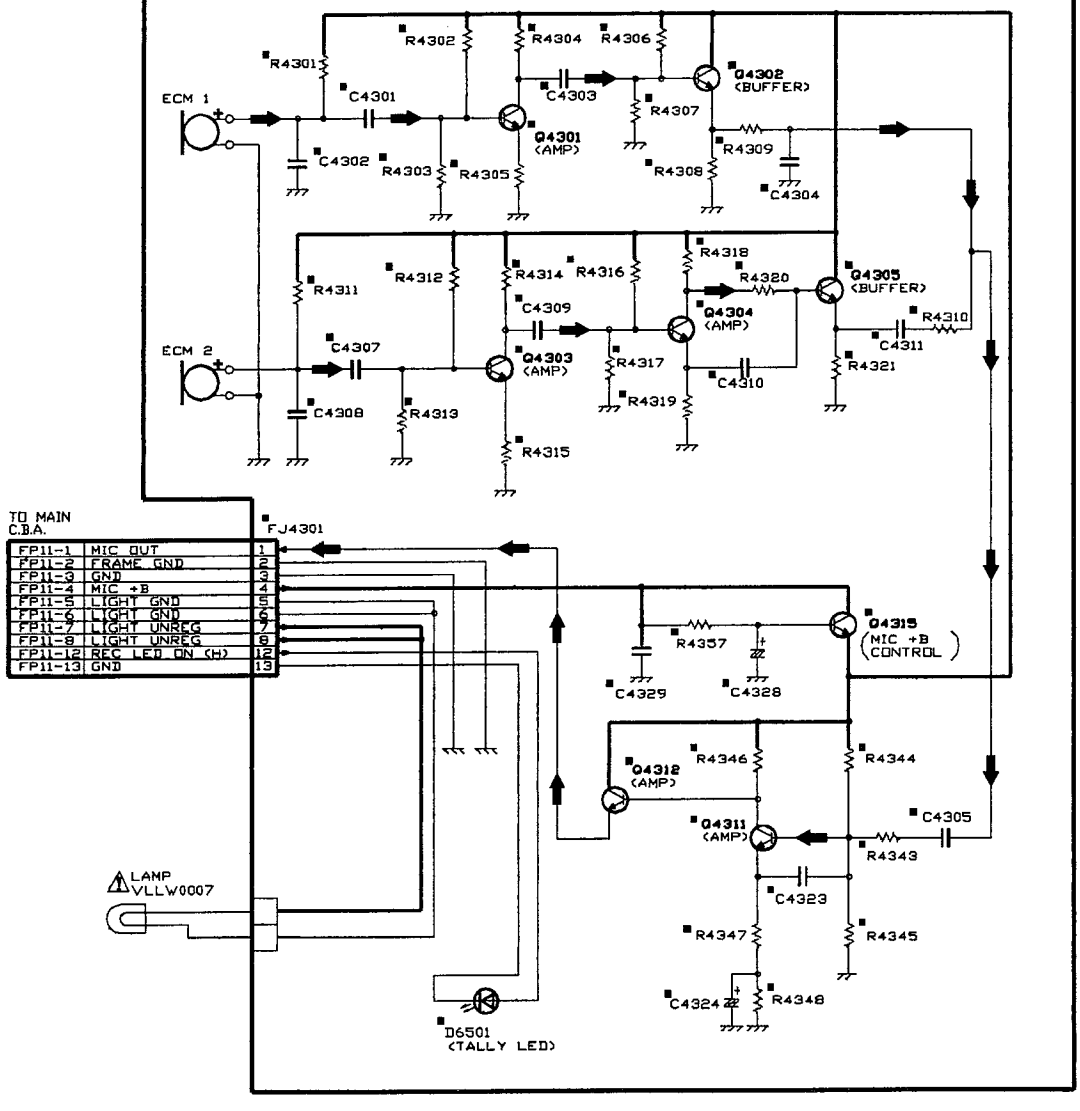
IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED BY THE ⚠ SYMBOL HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

⬅ MAIN SIGNAL PATH IN REC MODE

MIC UNIT VXMW0089

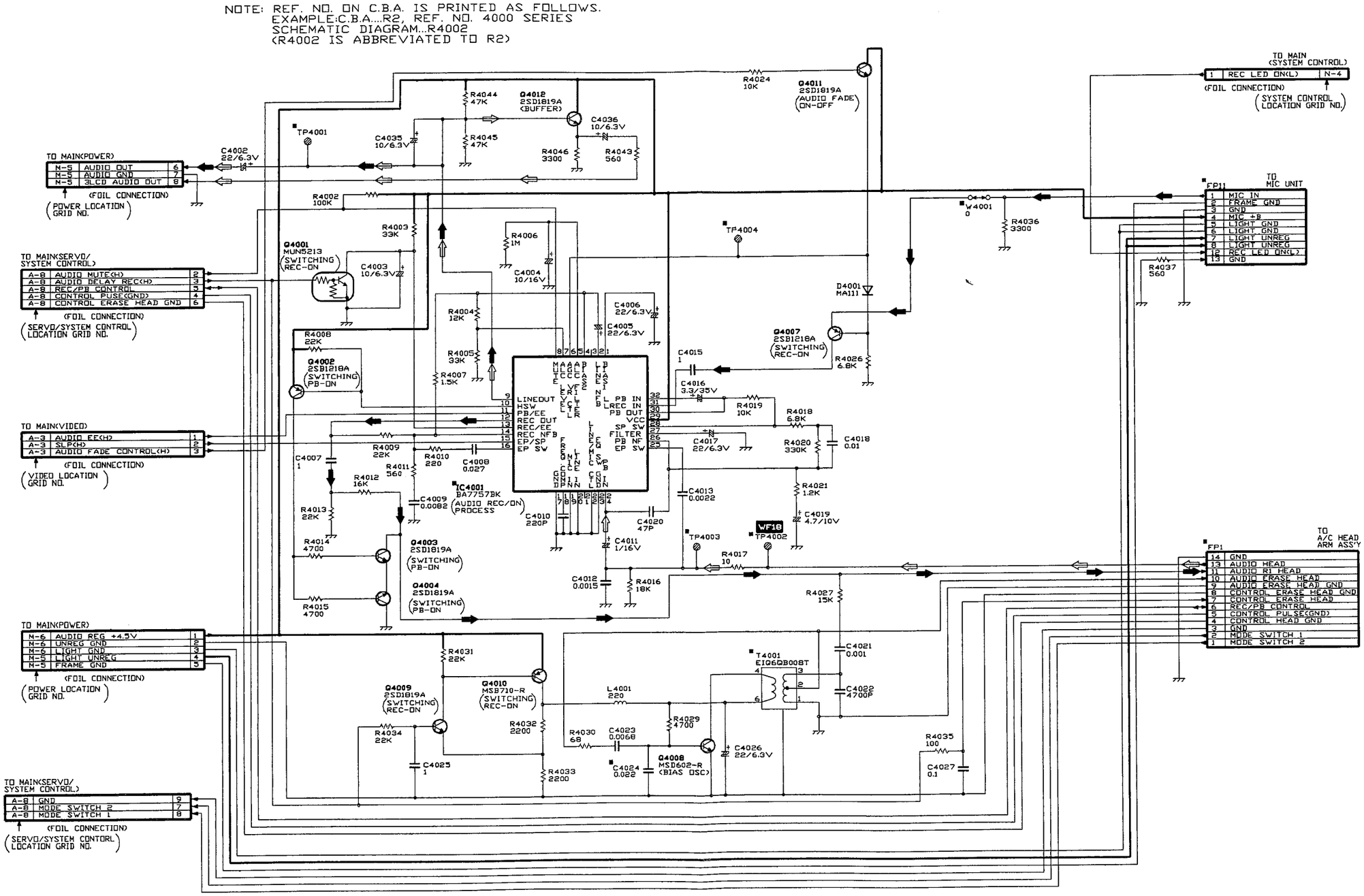
NOTE : THIS CIRCUIT IS NOT SERVICEABLE AND IS SUPPLIED AS A UNIT ONLY FOR REPLACEMENT.



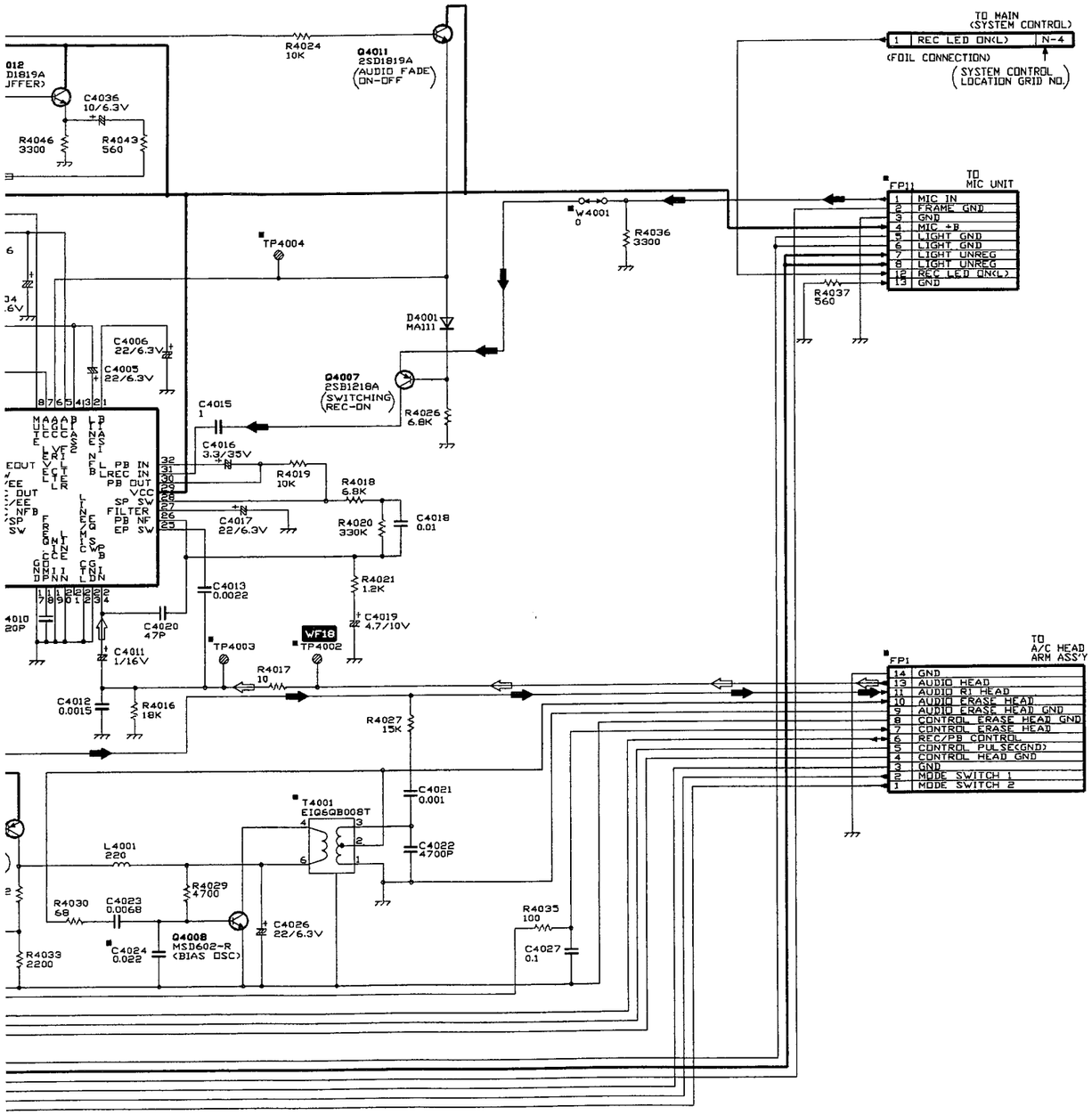
MAIN(AUDIO) SCHEMATIC DIAGRAM

⇦ AUDIO PB MODE ⇦ AUDIO REC MODE

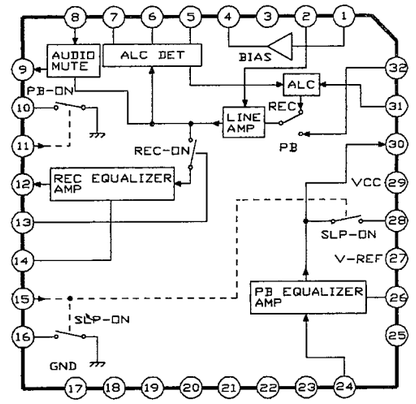
NOTE: REF. NO. ON C.B.A. IS PRINTED AS FOLLOWS.
EXAMPLE:C.B.A....R2, REF. NO. 4000 SERIES
SCHEMATIC DIAGRAM...R4002
(R4002 IS ABBREVIATED TO R2)



FOLLOWS.
ERIES



IC BLOCK DIAGRAM
IC4001



VOLTAGE CHART

MODE / PIN No.	REC	PLAY
IC4001		
1	2.2	2.2
2	2.2	2.2
3	0	0
4	2.2	2.3
5	0.6	0
6	0	1.3
7	1.6	1.7
8	0	0
9	2.2	2.2
10	4.4	3.8
11	4.0	0
12	2.2	2.3
13	0	4.0
14	2.2	2.3
15	4.4	4.4
16	0	0
17	0	0
18	2.8	2.9
19	0	0
20	0	0
21	0	0
22	0	0
23	0	0
24	1.6	1.6
25	0	0
26	1.6	1.7
27	4.4	4.5
28	1.6	1.7
29	4.5	4.5
30	1.6	1.7
31	2.2	2.2
32	2.2	2.2

MODE / PIN No.	REC	PLAY
Q4001		
E	0	0
C	0	4.0
B	4.5	0
Q4002		
E	0	4.5
C	-14.8	4.5
B	4.5	3.8
Q4003		
E	-8.1	0
C	0	0
B	-15.7	0.6
Q4004		
E	8.1	0
C	0	0
B	0	0.6
Q4007		
E	0	0
C	0	0
B	0	0.8
Q4008		
E	0	0
C	4.0	0
B	-0.3	0
Q4009		
E	3.7	0
C	3.8	4.5
B	4.3	0
Q4010		
E	4.5	4.5
C	4.4	0
B	3.7	4.5
Q4011		
E	0	1.2
C	4.5	0
B	0.1	1.8

MODE / PIN No.	REC	PLAY
Q4012		
E	1.6	1.6
C	4.5	4.5
B	2.2	2.2
TP4001	1.1	1.1
TP4002	0	0
TP4003	0	0
TP4004	0	0
TP4005	0	0

MAIN (AUDIO) SECTION	
TRANSISTOR	
Q4001	B-4
Q4002	B-3
Q4003	C-2
Q4004	C-2
Q4007	E-4
Q4008	D-1
Q4009	C-2
Q4010	C-2
Q4011	E-5
Q4012	D-5
I C	
IC4001	C-3
CONNECTOR	
FP1	G-2
FP11	G-4
TEST POINT	
TP4001	B-5
TP4002	E-3
TP4003	D-3
TP4004	E-4

D E F G H I J K L

INTERCONNECTION SCHEMATIC DIAGRAM

COMPARISION CHART OF MODELS & MARKS

MODEL	MARK
PV-L657	A
PV-L757	B

IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED BY THE ⚠ SYMBOL HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

LENS UNIT VXNW0002

FOCUS MOTOR 2	1
FOCUS MOTOR 4	2
FOCUS MOTOR 1	3
FOCUS MOTOR 3	4
ZOOM ENCODER	5
LED CONTROL	6
FOCUS ENCODER	7
AF +4.5V	8
ZOOM MOTOR 2	9
ZOOM MOTOR 4	10
ZOOM MOTOR 3	11
ZOOM MOTOR 1	12
HALL OUT(-)	13
HALL IN(+)	14
HALL OUT(+)	15
HALL IN(-)	16
ALC CONTROL(+)	17
ALC CONTROL(-)	18
ALC MAIN(-)	19
ALC MAIN(+)	20

MAIN C.B.A. VEPW1566C1 A / VEPW1566D1 B

FP9

1	FOCUS MOTOR 2
2	FOCUS MOTOR 4
3	FOCUS MOTOR 1
4	FOCUS MOTOR 3
5	ZOOM ENCODER
6	LED CONTROL
7	FOCUS ENCODER
8	AF +4.5V
9	ZOOM MOTOR 2
10	ZOOM MOTOR 4
11	ZOOM MOTOR 3
12	ZOOM MOTOR 1
13	HALL OUT(-)
14	HALL IN(+)
15	HALL OUT(+)
16	HALL IN(-)
17	ALC CONTROL(+)
18	ALC CONTROL(-)
19	ALC MAIN(-)
20	ALC MAIN(+)

FP3

	1
V REF (H)	2
ZOOM SWITCH DETECT	3
GND	4
LED +B	5
POWER LED ON (H)	6
SP(L)/SLP(H)	7
REC/PAUSE SWITCH (L)	8
REC LED ON (L)	9
DEW ON (H)	10
DEW GND	11
DISPLAY SWITCH (H)	12
KEY IN 1	13
SCAN 4	14
KEY IN 4	15
KEY IN 2	16
KEY IN 3	17
KEY DATA 1	18
REG +4.5V	19
KEY DATA 3	20
GND	21

TOP CONNECTOR UNIT VEQW0251

1	
2	V REF (H)
3	ZOOM SWITCH DETECT
4	GND
5	LED +B
6	POWER LED ON (H)
7	SP(L)/SLP(H)
8	REC/PAUSE SWITCH (L)
9	REC LED ON (L)
10	DEW ON (H)
11	DEW GND
12	DISPLAY SWITCH (H)
13	KEY IN 1
14	SCAN 4
15	KEY IN 4
16	KEY IN 2
17	KEY IN 3
18	KEY DATA 1
19	REG +4.5V
20	KEY DATA 3
21	GND

V REF (H)	1
ZOOM SWITCH DETECT	2
AF GND	3
LED +B	4
POWER LED ON (L)	5
SP(L)/SLP(H)	6
REC/PAUSE SWITCH (L)	7
REC LED ON (L)	8
DEW ON (H)	9
DEW GND	10
GND	11
KEY DATA 1	12
DOWN SWITCH	13
	14

SIDE L CONNECTOR UNIT VEQW0261

FJ802

1	V REF (H)
2	ZOOM SWITCH DETECT
3	AF GND
4	LED +B
5	POWER LED ON (L)
6	SP(L)/SLP(H)
7	REC/PAUSE SWITCH (L)
8	REC LED ON (L)
9	DEW ON (H)
10	DEW GND
11	GND
12	KEY DATA 1
13	DOWN SWITCH
14	

VCR OPERATION UNIT VEQW0163

KEY DATA 2
UNREG GND
UNREG GND
EVF +4.5V

MIC UNIT VXMW0089

MIC OUT	1
FRAME GND	2
GND	3
MIC +B	4
LIGHT GND	5
LIGHT GND	6
LIGHT UNREG	7
LIGHT UNREG	8
	9
	10
	11
REC LED ON(-)	12
GND	13

⚠ LAMP VLLW0007

LIGHT UNREG
LIGHT GND

TALLY LED

FP11

1	MIC IN
2	FRAME GND
3	GND
4	MIC +B
5	LIGHT GND
6	LIGHT GND
7	LIGHT UNREG
8	LIGHT UNREG
9	
10	
11	
12	REC LED ON(-)
13	GND

B P3

EVF OUT	1
	2
	3
EVF +4.5V	4
EVF GND	5
KEY DATA 2	6
R-Y	7
B-Y	8
EVF UNREG GND	9
EVF +4.5V	10
EVF +18V	11
CAMERA SERIAL DATA	12
CAMERA SERIAL CLOCK	13
EVF IC STROBE (H) (IC901)	14
EVF EEPROM CS (H) (IC902)	15

A P3

EVF OUT	1
REG +4.5V	2
	3
EVF +4.5V	4
EVF GND	5
KEY DATA 2	6

A EVF C.B.A. VEPW1563B1

TO DY — P903

1	H1
2	H2
3	V2
4	V1

FP902

KEY DATA 2	1
	2
UNREG GND	3
UNREG GND	4
	5
EVF +4.5V	6

TO CRT SOCKET

HV	
HK	
H	
G1	
G2	
G3	

P3

EVF OUT	1
REG +4.5V	2
	3
EVF +4.5V	4
EVF GND	5
KEY DATA 2	6

B/W EVF

<MECHANISM BLOCK>

<MECHANISM CHASSIS ASS'Y>

VCR HEAD

VIDEO SP(R) HEAD
VIDEO COMMON HEAD
VIDEO SP(L) HEAD
GND
VIDEO SLP(L) HEAD
VIDEO SLP COMMON HEAD
VIDEO SLP(R) HEAD
FLYING ERASE HEAD
GND
REG +4.5V

CAPSTAN A

GND
CAPSTAN FG
VMR
CAPSTAN VHC(-)
CAPSTAN VHC(+)
CAPSTAN H2(-)
CAPSTAN VH(+)
CAPSTAN H2(+)
MAIN COIL 3
CAPSTAN H1(-)
CAPSTAN VH(-)
CAPSTAN H1(+)
MAIN COIL 2
CAPSTAN H3(-)
CAPSTAN VH(+)
CAPSTAN H3(+)
MAIN COIL 1

CAP

VCR HEAD

CYL

MODE SW

AUDIO /CONTRAL HEAD

CYLINDER U

MAIN COIL 1
CYLINDER H3(+)
CYLINDER VHC-3H3
CYLINDER H3(-)
MAIN COIL 3
CYLINDER H2(+)
CYLINDER VHC-3H2
CYLINDER H2(-)
CYLINDER H1(+)
CYLINDER VHC-3H1
CYLINDER H1(-)
CYLINDER VHC(+)
CYLINDER VHC-3PG
CYLINDER VHC-3PG
MAIN COIL 2
CYLINDER PG
CYLINDER FG(-)
CYLINDER FG(+)

A/C HEAD ARM ASS'Y

1	MODE SWITCH 2
2	MODE SWITCH 1
3	GND
4	CONTROL HEAD GND
5	CONTROL PULSE(GND)
6	REC/PB CONTROL
7	CONTROL ERASE HEAD
8	CONTROL ERASE HEAD GND
9	AUDIO ERASE HEAD GND
10	AUDIO ERASE HEAD
11	AUDIO R1 HEAD
12	AUDIO R2 HEAD
13	AUDIO HEAD
14	GND

MECHANISM CHASSIS C.B.A. VEQW0226

1	SAFETY TAB SWITCH(L)
2	GND
3	CASSETTE DOWN(L)
4	GND
5	REG +4.5V
6	REG +4.5V
7	GND
8	GND
9	TAKEUP REEL PULSE
10	REG +4.5V
11	REG +4.5V
12	GND
13	GND
14	SUPPLY REEL PULSE
15	GND
16	GND
17	SENSOR LED PULSE
18	SENSOR LED PULSE
19	SUPPLY PHOTO TR ON(L)
20	GND

S-TAB SW C.DOWN SW S.LED S.PHOTO

S-REEL T-REEL

FP7

SAFETY TAB SWITCH(L)	1
GND	2
CASSETTE DOWN(L)	3
GND	4
REG +4.5V	5
REG +4.5V	6
GND	7
GND	8
TAKEUP REEL PULSE	9
REG +4.5V	10
REG +4.5V	11
GND	12
GND	13
SUPPLY REEL PULSE	14
GND	15
GND	16
SENSOR LED PULSE	17
SENSOR LED PULSE	18
SUPPLY PHOTO TR ON(L)	19
GND	20

P1

LOADING MOTOR 0	1
LOADING MOTOR 1	2

L.M

FP6

VIDEO SP(R) HEAD	1
VIDEO COMMON HEAD	2
VIDEO SP(L) HEAD	3
GND	4
VIDEO SLP(L) HEAD	5
VIDEO SLP COMMON HEAD	6
VIDEO SLP(R) HEAD	7
FLYING ERASE HEAD	8
GND	9
REG +4.5V	10

FE-5CH C.B.A.

1	VIDEO SP(R) HEAD
2	VIDEO COMMON HEAD
3	VIDEO SP(L) HEAD
4	GND
5	VIDEO SLP(L) HEAD
6	VIDEO SLP COMMON HEAD
7	VIDEO SLP(R) HEAD
8	FLYING ERASE HEAD
9	GND
10	REG +4.5V

VIDEO SP(R) HEAD	
VIDEO COMMON HEAD	
VIDEO SP(L) HEAD	
GND	
VIDEO SLP(L) HEAD	
VIDEO SLP COMMON HEAD	
VIDEO SLP(R) HEAD	
FLYING ERASE HEAD	
GND	
REG +4.5V	

FOCUS/POWER UNIT VEQW0230

FJ803

POWER SW — VCR / OFF / CAMERA

KEY IN 1	1
SCAN 3	2
SCAN 1	3
SCAN 2	4
KEY IN 2	5
GND	6
V REF(H)	7
MANUAL FOCUS 0	8
MANUAL FOCUS 1	9
AF GND	10

FP4

1	KEY IN 1
2	SCAN 3
3	SCAN 1
4	SCAN 2
5	KEY IN 2
6	GND
7	V REF(H)
8	MANUAL FOCUS 0
9	MANUAL FOCUS 1
10	AF GND

BATTERY CATCHER UNIT VJHW0053W

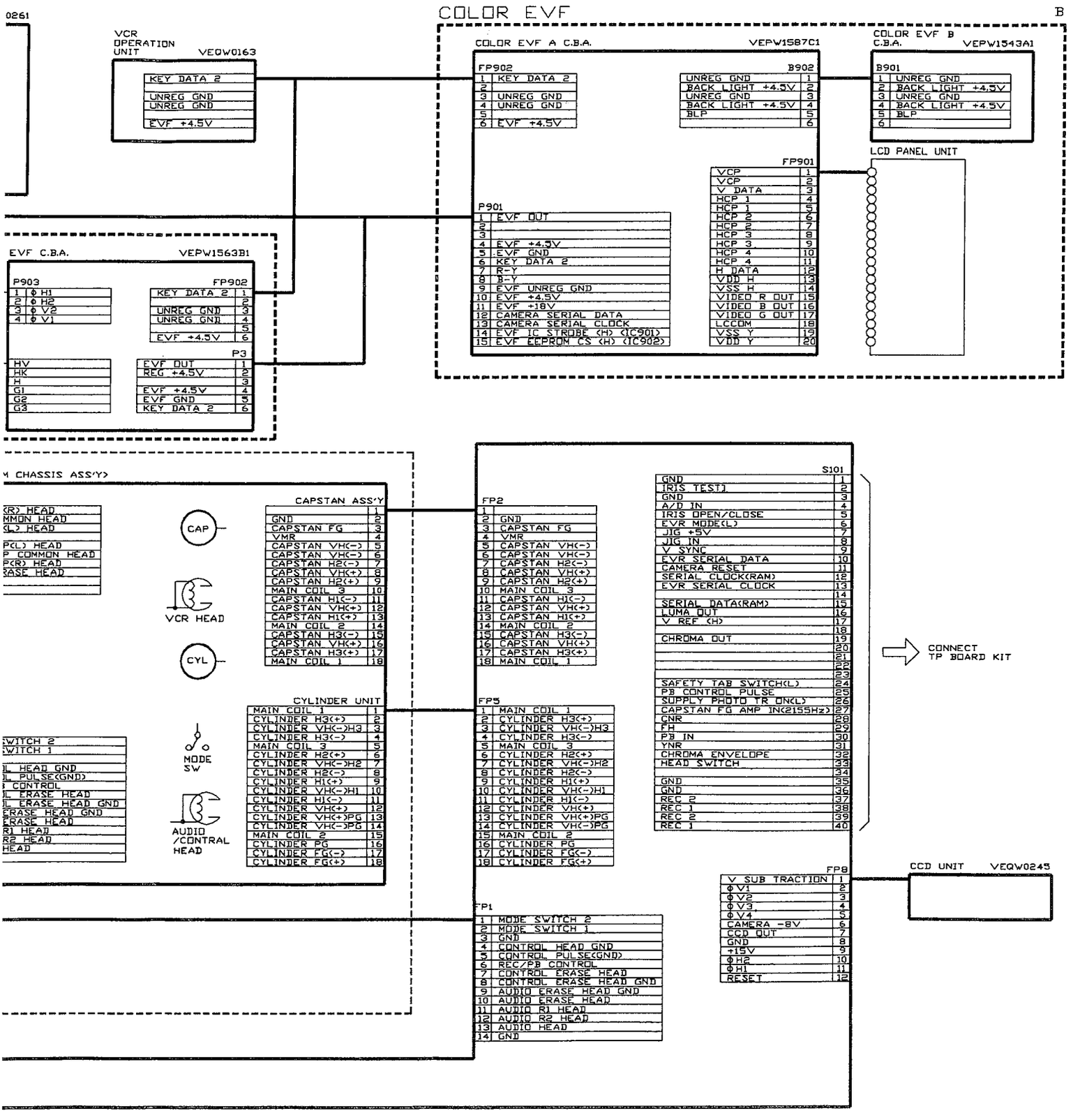
BATTERY JACK — DC JACK — BATTERY

B1

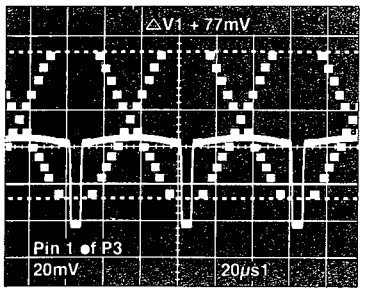
UNREG	1
EXT DC	2
BACK UP	3
UNREG GND	4
VIDEO OUT	5
GND	6
AUDIO(L) OUT	7
RF +4.7V	8

B2

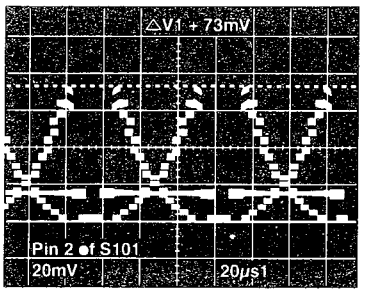
1	UNREG
2	EXT DC
3	BACK UP
4	UNREG GND
5	VIDEO OUT
6	GND
7	AUDIO(L) OUT
8	RF +4.7V


COLOR EVF
B
0261
VCR OPERATION UNIT VEQW0163
KEY DATA 2
UNREG GND
UNREG GND
EVF +4.5V
COLOR EVF A C.B.A. VEPW1587C1
FP902
1 KEY DATA 2
2
3 UNREG GND
4 UNREG GND
5
6 EVF +4.5V
B902
UNREG GND 1
BACK LIGHT +4.5V 2
UNREG GND 3
BACK LIGHT +4.5V 4
BLP 5
6
COLOR EVF B C.B.A. VEPW1543A1
B901
1 UNREG GND
2 BACK LIGHT +4.5V
3 UNREG GND
4 BACK LIGHT +4.5V
5 BLP
6
LCD PANEL UNIT
FP901
VCP 1
VCP 2
V DATA 3
HCP 1 4
HCP 1 5
HCP 2 6
HCP 2 7
HCP 3 8
HCP 3 9
HCP 4 10
HCP 4 11
H DATA 12
VDD H 13
VSS H 14
VIDEO R OUT 15
VIDEO B OUT 16
VIDEO G OUT 17
LCCOM 18
VSS Y 19
VDD Y 20
P901
1 EVF OUT
2
3
4 EVF +4.5V
5 EVF GND
6 KEY DATA 2
7 R-Y
8 B-Y
9 EVF UNREG GND
10 EVF +4.5V
11 EVF +18V
12 CAMERA SERIAL DATA
13 CAMERA SERIAL CLOCK
14 EVF IC STROBE (H) (IC901)
15 EVF EEPROM CS (H) (IC902)
EVF C.B.A. VEPW1563B1
P903
1 Φ H1
2 Φ H2
3 Φ V2
4 Φ V1
FP902
KEY DATA 2 1
2
UNREG GND 3
UNREG GND 4
5
EVF +4.5V 6
P3
EVF OUT 1
REG +4.5V 2
3
EVF +4.5V 4
EVF GND 5
KEY DATA 2 6
HV
HK
H
G1
G2
G3
CHASSIS ASS'Y
(R) HEAD
MMON HEAD
(L) HEAD
P(L) HEAD
P COMMON HEAD
P(R) HEAD
RASE HEAD
CAP
VCR HEAD
CYL
MODE SW
AUDIO /CONTRAL HEAD
CAPSTAN ASS'Y
GND 2
CAPSTAN FG 3
VMR 4
CAPSTAN VH(-) 5
CAPSTAN VH(-) 6
CAPSTAN H2(-) 7
CAPSTAN VH(+) 8
CAPSTAN H2(+) 9
MAIN COIL 3 10
CAPSTAN H1(-) 11
CAPSTAN VH(+) 12
CAPSTAN H1(+) 13
MAIN COIL 2 14
CAPSTAN H3(-) 15
CAPSTAN VH(+) 16
CAPSTAN H3(+) 17
MAIN COIL 1 18
CYLINDER UNIT
MAIN COIL 1 1
CYLINDER H3(+) 2
CYLINDER VH(-)H3 3
CYLINDER H3(-) 4
MAIN COIL 3 5
CYLINDER H2(+) 6
CYLINDER VH(-)H2 7
CYLINDER H2(-) 8
CYLINDER H1(+) 9
CYLINDER VH(-)H1 10
CYLINDER H1(-) 11
CYLINDER VH(+) 12
CYLINDER VH(+)PG 13
CYLINDER VH(-)PG 14
MAIN COIL 2 15
CYLINDER PG 16
CYLINDER FG(-) 17
CYLINDER FG(+) 18
FP2
1
2 GND
3 CAPSTAN FG
4 VMR
5 CAPSTAN VH(-)
6 CAPSTAN VH(-)
7 CAPSTAN H2(-)
8 CAPSTAN VH(+)
9 CAPSTAN H2(+)
10 MAIN COIL 3
11 CAPSTAN H1(-)
12 CAPSTAN VH(+)
13 CAPSTAN H1(+)
14 MAIN COIL 2
15 CAPSTAN H3(-)
16 CAPSTAN VH(+)
17 CAPSTAN H3(+)
18 MAIN COIL 1
FP3
1 MAIN COIL 1
2 CYLINDER H3(+)
3 CYLINDER VH(-)H3
4 CYLINDER H3(-)
5 MAIN COIL 3
6 CYLINDER H2(+)
7 CYLINDER VH(-)H2
8 CYLINDER H2(-)
9 CYLINDER H1(+)
10 CYLINDER VH(-)H1
11 CYLINDER H1(-)
12 CYLINDER VH(+)
13 CYLINDER VH(+)PG
14 CYLINDER VH(-)PG
15 MAIN COIL 2
16 CYLINDER PG
17 CYLINDER FG(-)
18 CYLINDER FG(+)
FP1
1 MODE SWITCH 2
2 MODE SWITCH 1
3 GND
4 CONTROL HEAD GND
5 CONTROL PULSE(GND)
6 REC/PB CONTROL
7 CONTROL ERASE HEAD
8 CONTROL ERASE HEAD GND
9 AUDIO ERASE HEAD GND
10 AUDIO ERASE HEAD
11 AUDIO R1 HEAD
12 AUDIO R2 HEAD
13 AUDIO HEAD
14 GND
S101
GND 1
IRIS TEST 2
GND 3
A/D IN 4
IRIS OPEN/CLOSE 5
EVR MODE(L) 6
JIG +5V 7
JIG IN 8
V SYNC 9
EVR SERIAL DATA 10
CAMERA RESET 11
SERIAL CLOCK(RAM) 12
EVR SERIAL CLOCK 13
14
SERIAL DATA(RAM) 15
LUMA OUT 16
V REF (H) 17
18
CHROMA OUT 19
20
21
22
23
SAFETY TAB SWITCH(L) 24
PB CONTROL PULSE 25
SUPPLY PHOTO TR ON(L) 26
CAPSTAN FG AMP IN(2155Hz) 27
CNR 28
FH 29
PB IN 30
YNR 31
CHROMA ENVELOPE 32
HEAD SWITCH 33
34
GND 35
GND 36
REC 2 37
REC 1 38
REC 2 39
REC 1 40
CONNECT TP BOARD KIT
FP8
V SUB TRACTION 1
ΦV1 2
ΦV2 3
ΦV3 4
ΦV4 5
CAMERA -8V 6
CCD OUT 7
GND 8
+15V 9
ΦH2 10
ΦH1 11
RESET 12
CCD UNIT VEQW0245
H
I
J
K
L

WAVEFORM PHOTOGRAPH



WF 1



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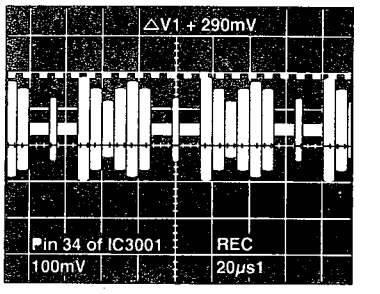

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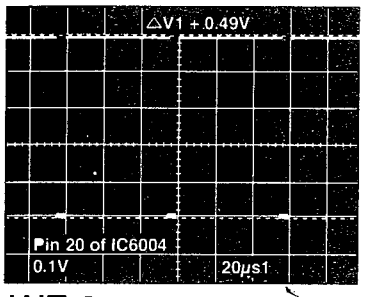

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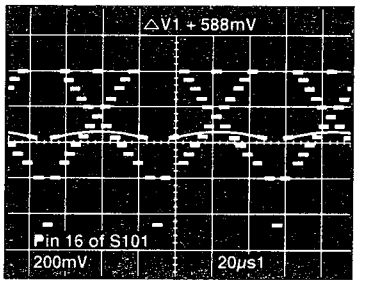

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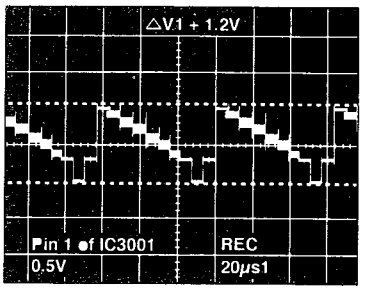

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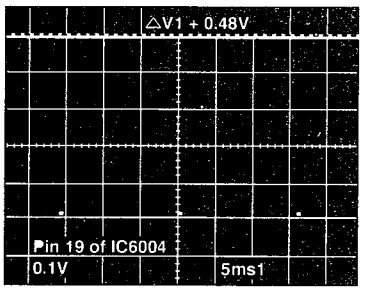

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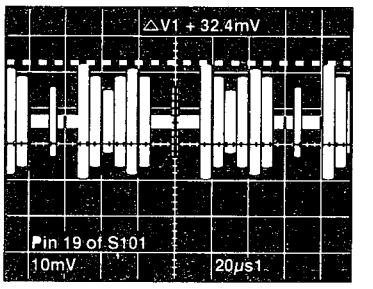

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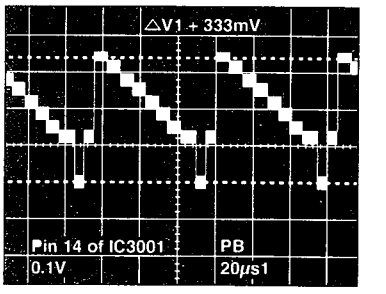

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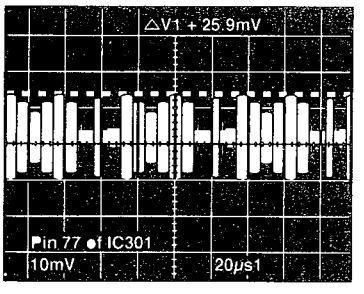

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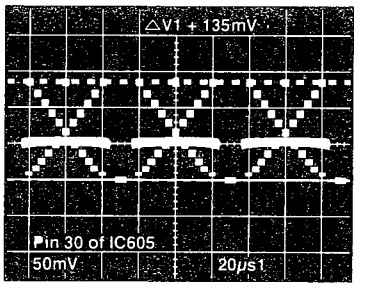

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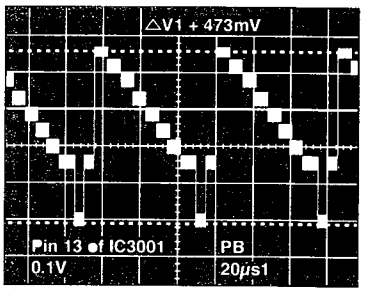

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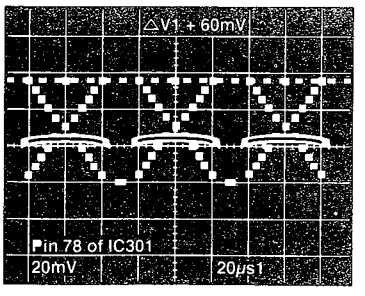

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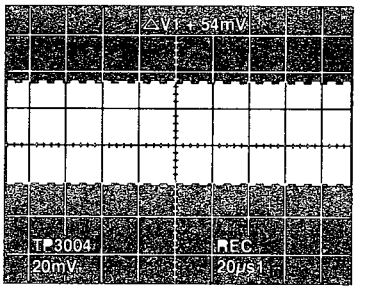

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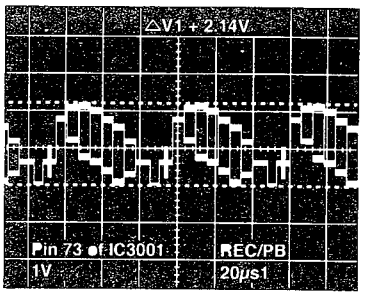

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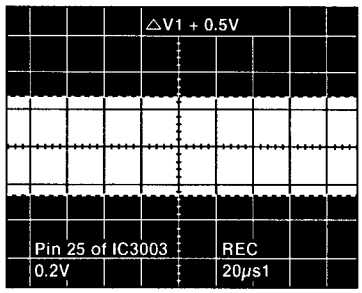

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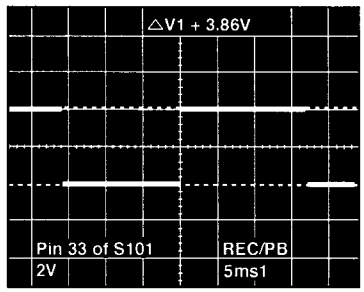

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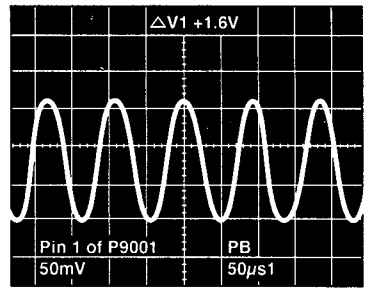
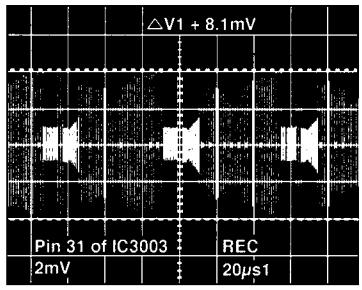


WF 28 **Audio Volume Maximum.**



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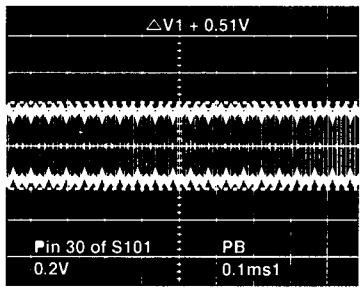

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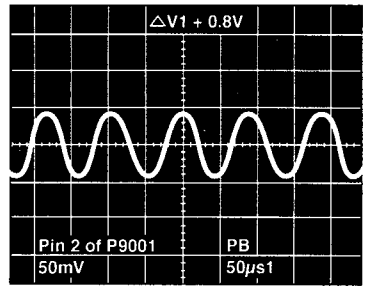

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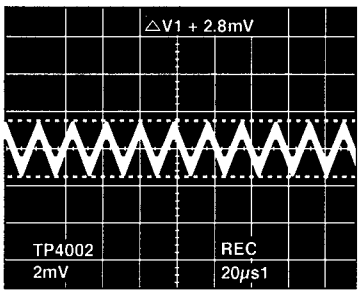

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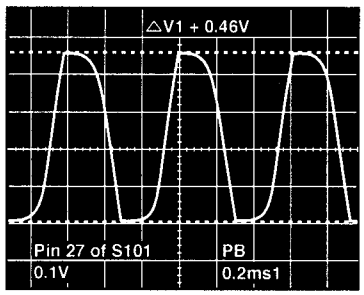

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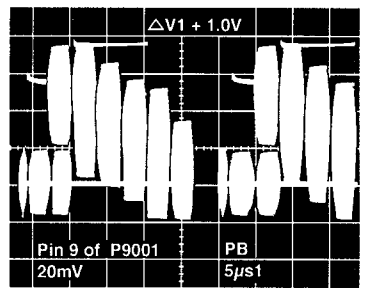

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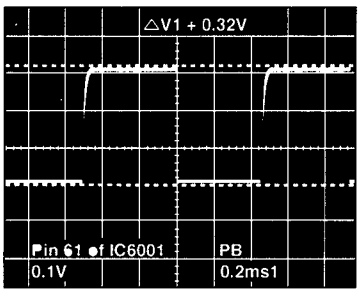

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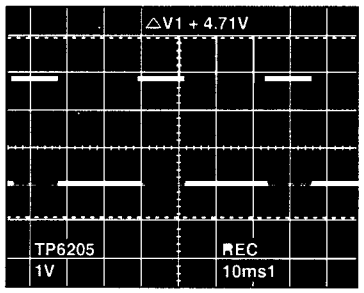

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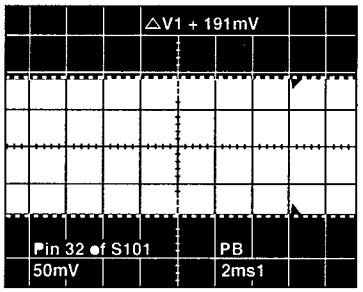

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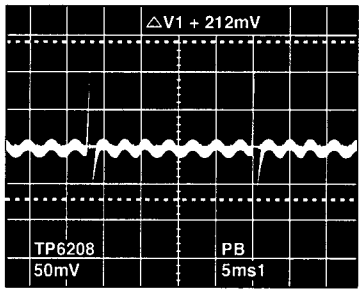


WF 25

V. CIRCUIT BOARD LAYOUT

NOTE :
1. DO NOT USE THE PART NUMBER SHOWN ON THIS DRAWING FOR ORDERING. THE CORRECT PART NUMBER IS SHOWN IN THE PARTS LIST, AND MAY BE SLIGHTLY DIFFERENT OR AMENDED SINCE THIS DRAWING WAS PREPARED.
2. TO MAINTAIN ORIGINAL FUNCTION AND RELIABILITY OF REPAIRED UNITS, ONLY USE ORIGINAL REPLACEMENT PARTS WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THE SERVICE MANUAL.

TEST POINT INFORMATION
⊘ : USED FOR THE INDICATION OF TEST POINT WITHOUT TEST PIN.

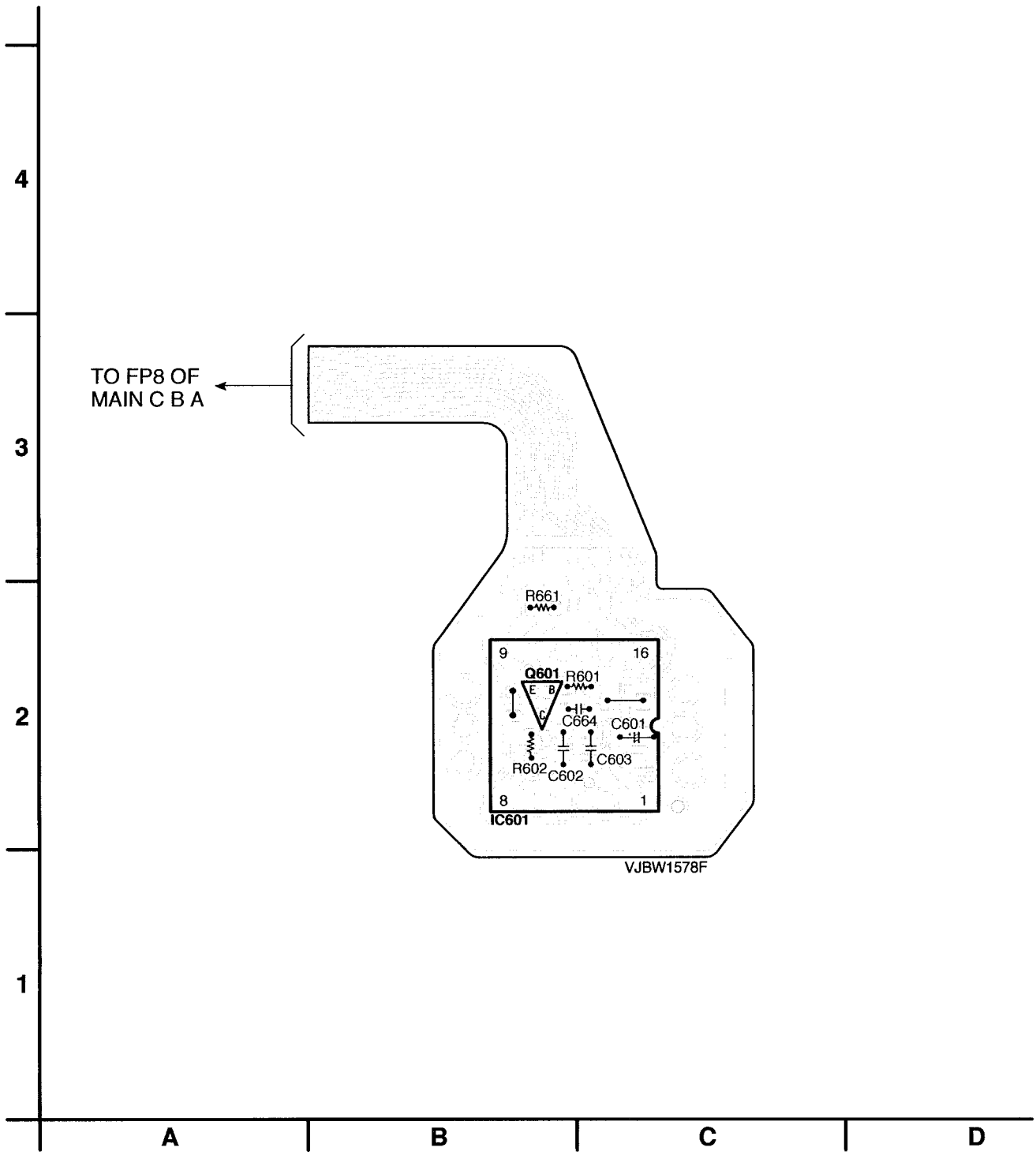
LEADLESS COMPONENT PARTS LOCATION GUIDE
MAIN C.B.A.

IC1001	L-4	Q3008	E-1	D1104	M-2	R1045	L-2	R2028	H-3	R311	J-4	R367	K-2	R423	K-4
IC2001	G-4	Q301	E-4	D3002	F-1	R1046	L-2	R2029	H-3	R3110	E-1	R368	K-2	R424	K-4
IC2002	H-4	Q302	J-4	D302	J-2	R105	M-3	R2030	H-3	R3111	E-1	R369	K-2	R425	K-4
IC2004	H-3	Q303	J-4	D303	L-4	R1051	C-3	R2031	H-4	R3112	E-1	R370	K-2	R429	K-4
IC3001	H-2	Q304	J-4	D4001	H-4	R1052	C-3	R2032	H-4	R3113	F-1	R371	K-2	R430	K-4
IC3002	I-2	Q305	J-4	D6001	J-4	R1053	C-3	R2033	H-3	R3114	J-1	R372	D-2	R431	L-5
IC3003	I-1	Q306	K-4	D6005	F-3	R1054	C-2	R2034	H-4	R3115	I-1	R373	D-2	R436	L-4
IC301	D-4	Q307	J-5	D6006	F-3	R1055	L-2	R2035	H-4	R3116	J-2	R374	D-3	R6001	L-3
IC305	K-4	Q308	K-4	D6008	J-4	R1056	L-2	R2040	F-4	R312	J-4	R375	E-3	R6009	J-4
IC306	J-2	Q309	L-4	D601	M-3	R1057	L-2	R2042	H-4	R3129	H-4	R376	A-4	R6010	J-4
IC307	J-3	Q310	K-2	D6011	I-3	R106	M-3	R3001	F-1	R313	J-4	R377	B-4	R6011	E-4
IC308	K-4	Q311	K-2	D6015	E-3	R1060	M-1	R3002	F-2	R3130	I-2	R378	A-4	R6020	E-3
IC309	D-2	Q4001	I-4	D602	L-4	R1061	L-2	R3003	G-2	R3133	I-2	R379	B-4	R6021	J-3
IC4001	H-4	Q4002	I-4	D6021	K-3	R1062	M-1	R3004	G-2	R3134	I-2	R380	M-4	R6022	J-3
IC6001	I-3	Q4003	F-4	D603	L-4	R1063	M-2	R3005	G-2	R314	J-4	R381	J-3	R6025	F-2
IC6002	J-3	Q4004	F-4	D605	C-3	R1064	M-2	R3006	H-2	R3140	F-2	R382	J-3	R6026	F-2
IC6004	I-2	Q4007	H-4	D618	B-4	R1065	M-1	R3008	G-2	R315	K-4	R383	L-5	R6027	F-2
IC6005	I-4	Q4008	I-4	D6201	F-3	R1066	C-2	R3009	G-1	R3150	I-1	R384	L-5	R6028	F-2
IC6006	E-4	Q4009	I-5	D6203	F-3	R1067	C-2	R301	E-4	R3151	I-2	R385	C-5	R6029	F-2
IC6007	E-3	Q4010	F-5	D6250	E-4	R1068	M-2	R3010	G-2	R3152	H-1	R386	K-5	R603	M-4
IC6008	E-3	Q4011	F-4	R1003	L-2	R107	M-3	R3011	G-2	R3153	F-2	R387	L-5	R6030	F-2
IC602	M-4	Q4012	B-2	R1004	L-2	R1071	C-2	R3015	G-2	R3154	F-2	R388	L-5	R6031	I-3
IC603	B-4	Q6004	J-4	R1005	L-2	R1072	L-2	R3016	G-2	R3157	E-3	R389	L-5	R6032	I-3
IC604	L-5	Q6005	I-4	R1006	L-2	R1074	L-2	R3017	I-2	R3158	J-2	R390	K-5	R6033	F-3
IC605	M-5	Q6008	I-4	R1007	L-2	R108	M-3	R3018	F-2	R316	K-4	R391	L-5	R6034	F-3
IC606	C-4	Q6009	E-4	R1008	L-2	R1083	L-2	R3019	H-2	R3160	J-3	R393	L-5	R6035	H-3
IC701	K-1	Q6010	F-2	R1009	L-2	R1084	M-2	R302	J-4	R3161	J-2	R394	L-5	R6036	F-3
IC702	J-1	Q6011	F-3	R101	L-3	R1085	M-2	R3022	F-2	R317	K-4	R395	L-5	R6037	I-4
Q1001	L-3	Q6012	E-3	R1010	L-2	R1086	M-2	R3023	I-2	R319	J-4	R400	K-3	R6038	J-4
Q1002	L-3	Q6013	E-2	R1011	C-2	R109	M-3	R3024	I-2	R320	C-5	R4002	I-4	R6039	E-4
Q1006	C-1	Q6018	I-4	R1012	C-1	R1090	L-3	R303	E-4	R321	D-5	R4003	I-4	R6040	I-4
Q1007	C-2	Q602	L-3	R1013	L-1	R1092	M-2	R3031	G-1	R322	J-5	R4004	H-4	R6041	I-4
Q1008	M-1	Q6020	E-3	R1014	L-1	R1101	B-2	R3032	G-1	R323	K-5	R4005	H-4	R6042	I-4
Q1009	M-1	Q6021	J-3	R1015	C-1	R1102	A-2	R3033	G-1	R325	K-4	R4006	F-4	R6043	E-4
Q101	L-3	Q6022	J-4	R1016	C-1	R1103	A-2	R3034	G-1	R326	E-4	R4007	I-4	R6044	E-4
Q1010	L-1	Q6023	L-3	R1017	C-1	R1104	A-2	R3035	G-1	R328	E-4	R4008	I-4	R6045	E-4
Q1011	L-1	Q6025	F-3	R1018	C-1	R1105	A-2	R3036	G-1	R329	K-4	R4009	I-4	R6046	J-4
Q1012	L-1	Q603	L-3	R1019	C-1	R1106	M-2	R3037	F-1	R333	L-4	R4010	I-4	R6047	F-4
Q1013	K-2	Q604	L-3	R102	M-3	R1107	B-2	R3038	F-1	R336	K-4	R4011	I-4	R6048	F-4
Q1014	K-2	Q605	L-4	R1020	L-2	R1108	B-2	R3039	G-1	R337	L-4	R4012	I-4	R6049	F-3
Q1017	C-3	Q606	L-4	R1021	L-2	R1109	M-2	R304	J-4	R338	K-4	R4013	I-4	R605	M-4
Q1018	C-3	Q607	L-4	R1022	C-1	R1110	M-2	R3040	H-1	R339	K-4	R4014	F-4	R6050	J-4
Q1019	M-1	Q608	L-4	R1023	C-2	R1111	M-2	R3041	H-1	R340	K-3	R4015	F-4	R6051	I-4
Q102	L-3	Q609	L-4	R1024	C-2	R1112	B-2	R3044	H-1	R341	J-2	R4016	F-5	R6052	F-4
Q1020	M-1	Q610	C-5	R1025	C-2	R1113	M-2	R3045	I-1	R342	K-3	R4017	F-5	R6053	F-2
Q1021	K-2	Q611	B-4	R1026	C-1	R2001	K-5	R3046	F-1	R343	K-2	R4018	F-4	R6056	F-3
Q1022	L-2	Q612	M-4	R1027	C-1	R2003	K-5	R3047	F-1	R344	D-2	R4019	F-4	R6058	J-3
Q1023	L-2	Q613	B-5	R1028	L-1	R2004	K-5	R3048	F-2	R346	K-2	R402	D-5	R606	M-4
Q103	M-3	Q614	M-5	R1029	L-1	R2008	H-4	R305	J-4	R347	K-2	R4020	F-4	R6060	J-3
Q1031	L-2	Q615	B-4	R103	L-3	R2009	H-4	R3050	F-2	R349	K-2	R4021	F-4	R6061	J-3
Q1032	M-2	Q616	B-5	R1030	L-1	R2010	G-4	R306	J-4	R350	K-2	R4024	H-4	R6062	J-3
Q1033	M-2	Q617	L-4	R1031	L-2	R2011	F-4	R307	J-4	R351	K-2	R4026	H-4	R6063	J-3
Q1034	M-2	Q6201	F-3	R1032	L-2	R2012	F-4	R3076	I-2	R352	D-2	R4027	I-5	R6064	J-3
Q104	M-3	Q6202	F-3	R1033	L-2	R2013	F-4	R3077	I-2	R353	K-2	R4029	I-4	R6068	F-3
Q1101	M-2	Q703	K-2	R1034	K-2	R2014	H-3	R308	J-4	R355	K-2	R4030	I-5	R607	M-4
Q1102	B-2	D1002	M-1	R1035	K-2	R2015	H-3	R309	J-4	R356	K-2	R4031	F-5	R6072	J-3
Q1103	M-2	D1003	L-2	R1036	K-2	R2016	H-3	R310	J-4	R357	K-2	R4032	F-5	R6073	J-3
Q1104	B-2	D1005	C-2	R1037	L-2	R2017	H-3	R3101	E-2	R358	D-2	R4033	I-5	R6074	J-3
Q1105	M-2	D1006	M-1	R1038	L-2	R2018	H-3	R3102	E-2	R359	D-2	R4034	I-5	R6075	J-3
Q1106	B-2	D1007	L-1	R1039	L-2	R2019	H-3	R3103	E-2	R360	K-2	R4035	I-4	R6077	I-3
Q1107	B-2	D1008	L-1	R104	L-3	R2021	H-3	R3104	E-2	R361	K-2	R4036	H-4	R6079	J-3
Q3001	F-1	D1010	L-1	R1040	C-2	R2022	H-3	R3105	F-1	R362	K-2	R4037	F-4	R608	M-4
Q3003	G-1	D1011	C-1	R1041	C-2	R2023	H-3	R3106	I-1	R363	D-2	R4043	B-2	R6080	J-3
Q3004	G-1	D1013	B-3	R1042	C-2	R2025	H-3	R3107	I-1	R364	D-2	R4044	B-2	R6081	E-3
Q3005	F-1	D1016	M-1	R1043	M-1	R2026	H-3	R3108	I-1	R365	K-2	R4045	B-2	R6082	J-3
Q3007	E-1	D1102	M-2	R1044	L-2	R2027	H-3	R3109	E-1	R366	D-2	R4046	B-2	R6083	I-3

R6084	I-3	R6184	E-3	R702	E-2	C1026	M-1	C3003	H-2	C3098	I-2	C4007	I-4	C617	B-4
R6085	F-3	R619	M-4	R703	E-2	C1027	C-2	C3005	G-2	C3099	I-2	C4008	I-4	C618	B-3
R6086	F-3	R620	B-4	R704	D-2	C1028	K-2	C3006	F-2	C310	K-5	C4009	I-4	C619	B-3
R6087	F-3	R6202	J-4	R705	K-3	C1029	L-2	C3007	H-2	C3101	F-2	C4010	I-5	C620	M-3
R6088	F-3	R6203	J-4	R706	K-3	C1030	L-2	C3008	G-2	C3103	F-2	C4011	H-5	C6202	J-4
R6089	F-3	R6204	J-4	R707	K-3	C1034	L-2	C3009	H-2	C3104	F-2	C4012	F-5	C6203	J-4
R609	B-4	R6206	F-3	R708	K-3	C1035	C-2	C301	J-4	C3105	F-2	C4013	G-4	C6205	F-4
R6090	F-3	R6207	F-4	R709	K-3	C1036	L-2	C3010	G-2	C3107	F-2	C4015	H-4	C6206	F-4
R6091	I-3	R6208	F-3	R710	K-2	C1037	C-3	C3011	G-2	C3108	E-2	C4016	G-4	C6207	F-3
R6092	I-3	R6209	F-4	R711	K-3	C1038	C-2	C3012	G-2	C3109	I-1	C4017	F-4	C6208	F-3
R6093	I-3	R6210	F-4	R712	J-2	C1039	C-3	C3013	G-2	C3110	F-1	C4018	F-4	C621	M-3
R6094	F-3	R6215	H-3	R713	J-2	C1040	C-2	C3014	G-2	C311	K-5	C4019	F-4	C6211	H-3
R6095	F-3	R6217	H-3	R714	J-2	C1044	L-2	C3015	G-1	C3111	I-1	C4020	H-5	C6214	H-3
R6096	F-3	R6219	F-2	R715	J-2	C1045	L-2	C3017	G-1	C3112	I-1	C4021	I-5	C6219	H-3
R6099	I-3	R6220	F-2	R718	J-2	C1046	B-2	C3018	H-1	C3113	I-1	C4022	I-5	C622	L-3
R610	M-3	R6221	F-2	R719	D-2	C1047	L-1	C3019	I-1	C3114	I-1	C4023	I-5	C6220	H-3
R6100	F-3	R6226	F-3	R720	D-2	C1048	L-2	C302	J-4	C3115	I-1	C4024	I-4	C6222	F-3
R6101	F-3	R6230	F-2	R721	J-2	C1049	B-2	C3021	H-1	C3116	I-1	C4025	I-5	C6223	H-3
R6102	I-2	R624	A-4	R722	J-2	C1050	C-2	C3023	F-1	C3117	I-1	C4026	F-5	C6225	F-3
R6103	E-3	R625	A-4	R723	J-2	C1052	L-2	C3024	H-2	C3118	F-1	C4027	I-4	C623	B-4
R6104	E-2	R6250	E-4	R724	J-2	C1053	L-2	C3025	F-1	C3119	J-1	C4035	A-2	C624	L-4
R6107	E-4	R6251	J-4	R726	D-2	C1054	K-2	C3028	I-1	C312	K-4	C4036	B-2	C625	M-4
R6108	E-3	R6252	E-4	R728	K-2	C1056	M-1	C3029	I-2	C3120	J-1	C6001	J-4	C6250	E-4
R6109	F-3	R626	B-3	R729	K-1	C1057	M-1	C303	J-4	C3121	I-1	C6002	F-2	C6251	E-4
R611	M-4	R627	L-3	R730	J-2	C1058	L-2	C3030	F-2	C3122	I-1	C6003	F-2	C626	M-4
R6110	J-4	R628	L-3	R732	D-2	C1060	L-2	C3031	G-2	C3123	I-1	C6004	H-2	C627	B-3
R6111	F-4	R630	L-3	R734	J-2	C1062	M-2	C3032	G-2	C3124	I-1	C6005	H-2	C628	L-4
R6112	F-4	R631	L-3	R735	D-2	C1063	B-3	C3033	G-2	C3125	E-1	C6006	I-4	C629	L-4
R6113	F-3	R632	M-4	R736	E-2	C1065	M-2	C3034	I-2	C3126	E-1	C6007	F-4	C630	L-4
R6114	F-3	R633	L-4	R737	E-2	C1101	B-2	C3036	I-2	C313	C-4	C6008	F-4	C631	L-4
R6115	J-3	R634	L-4	R738	D-2	C1102	B-2	C3038	F-2	C3132	H-2	C6009	J-4	C633	B-4
R6116	I-3	R635	L-4	R739	D-2	C1103	M-2	C3039	F-2	C3135	F-2	C6011	J-3	C635	B-4
R6119	E-3	R636	L-5	R740	E-2	C2001	K-5	C304	D-4	C314	K-5	C6013	E-4	C636	B-5
R6120	J-3	R637	L-5	R743	J-2	C2002	K-5	C3040	F-2	C315	K-5	C6014	J-3	C637	B-5
R6129	J-3	R638	M-4	R744	J-2	C2003	K-5	C3042	G-2	C316	L-4	C6015	E-5	C638	M-5
R613	M-4	R639	L-4	R745	J-2	C2004	K-5	C3043	G-2	C317	K-5	C6016	I-3	C639	B-5
R6131	H-3	R640	M-4	R746	J-2	C2005	K-5	C3045	F-2	C318	K-4	C6017	J-2	C640	M-5
R6132	H-3	R641	L-4	R747	J-2	C2006	K-5	C3046	F-2	C319	K-4	C6018	I-4	C641	B-5
R6133	F-3	R642	M-3	R748	J-2	C2007	E-5	C3047	H-2	C320	L-4	C6020	I-2	C642	M-5
R6135	I-4	R643	L-3	R749	J-2	C2008	H-3	C3048	F-1	C321	K-4	C6021	J-2	C643	B-5
R6140	E-3	R644	M-3	R750	L-3	C2011	H-4	C305	K-4	C322	C-4	C6022	I-2	C644	B-4
R6141	E-3	R645	C-4	R751	L-3	C2012	H-4	C3053	G-1	C323	L-4	C6023	I-3	C645	M-4
R6143	K-1	R646	C-4	C1002	L-2	C2013	H-4	C3054	H-1	C326	C-4	C6025	F-4	C646	M-4
R6144	K-1	R648	C-5	C1003	L-2	C2014	F-4	C3055	I-1	C327	D-4	C6028	F-4	C647	A-5
R6145	F-3	R649	C-4	C1004	L-2	C2015	H-3	C3057	H-1	C328	L-4	C6029	E-4	C648	A-5
R6146	J-3	R650	L-4	C1005	K-1	C2016	H-3	C3058	G-1	C330	C-3	C6031	M-3	C649	B-5
R6147	J-3	R652	L-4	C1006	C-1	C2017	H-3	C3059	F-1	C331	J-2	C6032	H-3	C651	B-4
R6148	F-3	R653	C-5	C1007	C-1	C2018	H-3	C306	K-5	C332	J-3	C6039	D-3	C662	M-3
R6149	F-3	R654	M-4	C1008	C-1	C2019	H-3	C3060	F-1	C333	K-3	C604	M-4	C701	K-3
R6150	F-3	R658	B-5	C1009	C-1	C2020	H-3	C3061	H-1	C335	K-3	C6040	E-3	C702	L-3
R6151	E-3	R659	B-5	C101	B-3	C2021	H-3	C3066	F-1	C336	D-2	C6041	C-2	C703	D-1
R6152	J-4	R660	B-4	C1010	C-1	C2022	H-3	C3068	I-2	C337	K-2	C6042	C-3	C704	D-1
R6153	J-3	R662	M-5	C1011	L-2	C2023	H-3	C307	J-5	C338	K-2	C6043	C-3	C705	D-2
R6154	B-3	R663	B-4	C1012	L-2	C2024	H-3	C3070	I-2	C339	K-2	C6044	E-3	C706	E-1
R6169	J-2	R664	B-4	C1013	C-2	C2025	H-3	C3072	I-2	C340	K-2	C6046	C-2	C707	E-1
R617	M-3	R665	B-4	C1014	L-1	C2027	H-3	C3073	I-2	C341	D-2	C605	B-4	C708	D-2
R6173	H-3	R666	M-4	C1015	L-1	C2028	H-2	C3074	F-2	C342	K-2	C606	B-4	C710	L-3
R6174	I-4	R667	B-4	C1016	L-1	C2029	H-2	C3075	E-2	C345	B-4	C607	M-4	FL3001	F-1
R6175	D-3	R668	M-4	C1017	L-1	C2030	H-2	C3077	F-2	C346	B-4	C608	M-3	FL601	B-5
R6176	D-3	R669	L-4	C1018	L-1	C2031	H-2	C3078	F-2	C357	K-3	C609	M-3	FL602	B-4
R6178	F-3	R670	L-4	C1019	L-1	C2032	H-2	C3079	F-2	C359	J-3	C610	B-3	L1001	B-1
R6179	F-4	R671	L-4	C1020	M-1	C2033	F-4	C308	K-5	C4002	F-4	C611	M-3	L1002	B-2
R618	M-3	R677	M-3	C1021	B-2	C2034	K-5	C3080	F-2	C4003	I-4	C612	L-3	L1003	C-1
R6180	D-3	R680	M-3	C1022	M-1	C2035	H-3	C3081	I-2	C4004	F-4	C614	B-4	L1004	B-1
R6181	D-3	R682	B-5	C1023	L-2	C3001	F-2	C3085	I-2	C4005	H-4	C615	C-3	L1005	C-2
R6182	A-3	R701	E-2	C1025	L-2	C3002	J-2	C309	K-5	C4006	H-4	C616	L-4	L1006	L-2

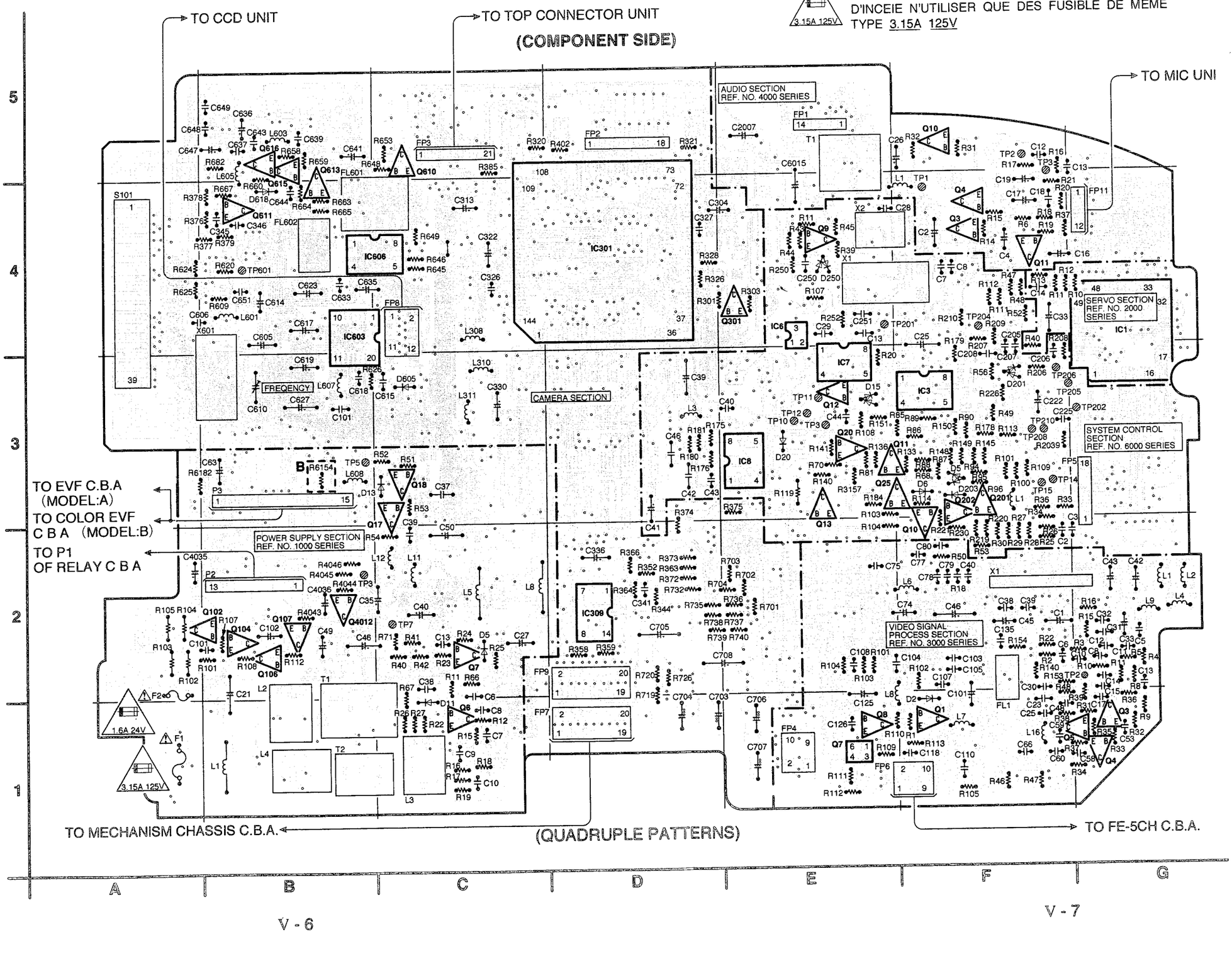
L1007	L-2	T4001	E-5
L1008	C-2	**TP1001**	**K-3**
L1009	L-2	**TP1002**	**K-2**
L1011	C-2	**TP1003**	**B-2**
L1012	C-2	**TP1004**	**L-2**
L1013	M-1	**TP1005**	**B-3**
L1014	L-2	**TP1006**	**K-2**
L1015	K-1	**TP1007**	**C-2**
L3001	G-2	**TP3001**	**I-2**
L3002	G-2	**TP3002**	**G-2**
L3003	H-2	**TP3003**	**H-2**
L3004	G-2	**TP3004**	**I-2**
L3006	F-2	**TP4001**	**F-4**
L3007	F-1	**TP4002**	**F-5**
L3008	E-1	**TP4003**	**F-5**
L3009	G-2	**TP4004**	**H-4**
L301	J-5	**TP4005**	**J-4**
L3011	H-1	**TP6001**	**I-4**
L3012	H-1	**TP6003**	**E-3**
L3013	H-1	**TP6004**	**I-2**
L3014	H-1	**TP6006**	**I-3**
L3015	H-1	**TP6007**	**I-3**
L3016	F-1	**TP6010**	**E-3**
L3017	H-1	**TP6011**	**E-3**
L302	J-4	**TP6012**	**E-3**
L303	K-4	**TP6013**	**E-3**
L304	K-5	**TP6014**	**E-3**
L305	K-5	**TP6015**	**F-3**
L306	K-5	**TP6020**	**I-3**
L307	K-5	**TP6021**	**J-4**
L308	C-4	**TP6022**	**J-4**
L310	C-3	**TP6201**	**F-3**
L311	C-3	**TP6202**	**G-3**
L4001	F-4	**TP6204**	**F-4**
L6001	F-3	**TP6205**	**F-3**
L6002	H-2	**TP6206**	**F-3**
L6003	D-3	**TP6207**	**H-4**
L601	B-4	**TP6208**	**F-3**
L602	L-5	**TP6210**	**F-3**
L603	B-5	**TP6212**	**H-2**
L605	B-5	**TP6220**	**J-5**
L607	B-3		
L608	B-3		
X3001	F-2		
X6001	E-4		
X6002	E-4		
X601	B-4		
B2	**M-2**		
P1	**J-1**		
P2	**B-2**		
P3	**B-3**		
FP1	**E-5**		
FP2	**D-5**		
FP3	**C-5**		
FP4	**E-1**		
FP5	**G-3**		
FP6	**E-1**		
FP7	**C-1**		
FP8	**C-4**		
FP9	**C-2**		
FP11	**G-4**		
F1001	**A-1**		
F1002	A-2		
T1001	B-2		
T1002	B-1		

CCD UNIT VEQW0245



MAIN(CAMERA/POWER SUPPLY/SERVO/VIDEO SIGNAL PROCESS/AUDIO/SYSTEM CONTROL)C.B.A.

CAUTION : FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE 3.15A 125V FUSE.
ATTENTION : POUR UNE PROTECTION CONTINUE LES RIS D'INCEIE N'UTILISER QUE DES FUSIBLE DE MEME TYPE 3.15A 125V

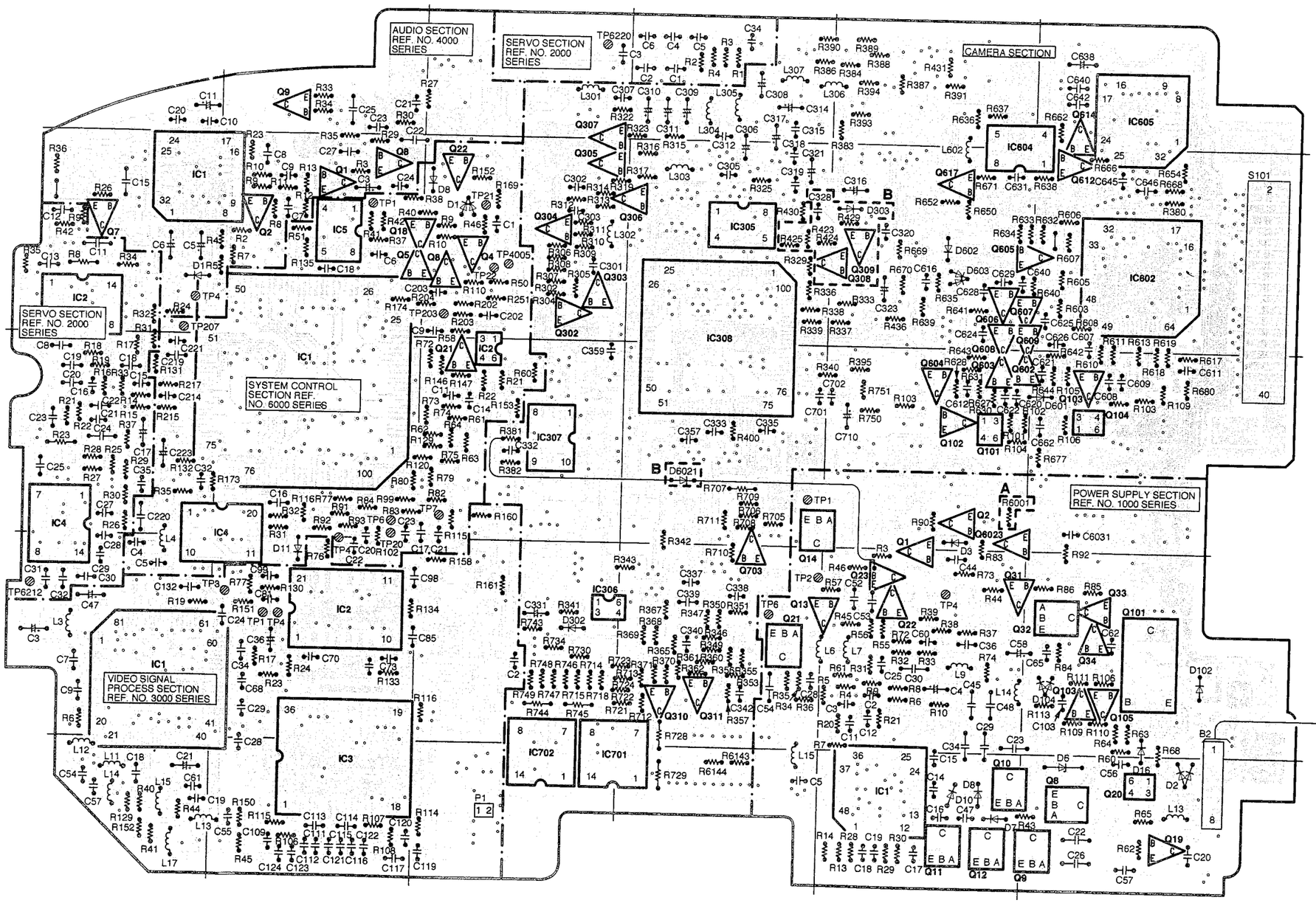


JES

CAUTION : FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,
REPLACE ONLY WITH THE SAME TYPE 1.6A 24V FUSE.
ATTENTION : POUR UNE PROTECTION CONTINUE LES RISQUES
D'INCEIE N'UTILISER QUE DES FUSIBLE DE MEME
TYPE 1.6A 24V

1.6A 24V

(FOIL SIDE)



(QUADRUPLE PATTERNS)

H I J K L M

C.B.A. NUMBER CHART

C.B.A. NUMBER	MODEL
VEPW1566C1	PV-L657
VEPW1566D1	PV-L757

COMPARISON CHART OF MODELS & MARKS

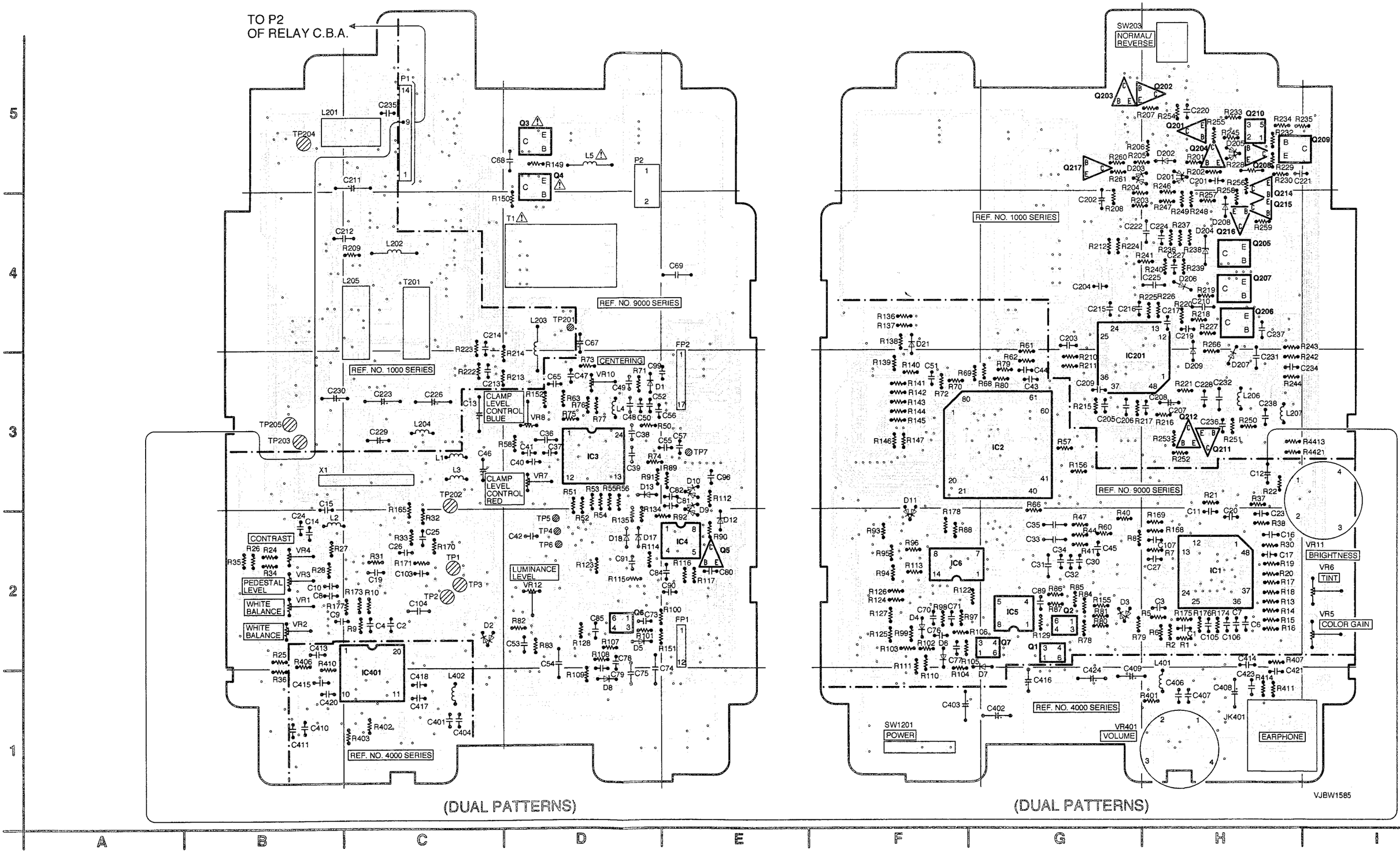
MODEL	MARK
PV-L657	A
PV-L757	B

IMPORTANT SAFETY NOTICE :
COMPONENTS IDENTIFIED BY THE ⚠ SYMBOL HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

LCD C.B A. VEPW1585A1

(COMPONENT SIDE)

(FOIL SIDE)



(DUAL PATTERNS)

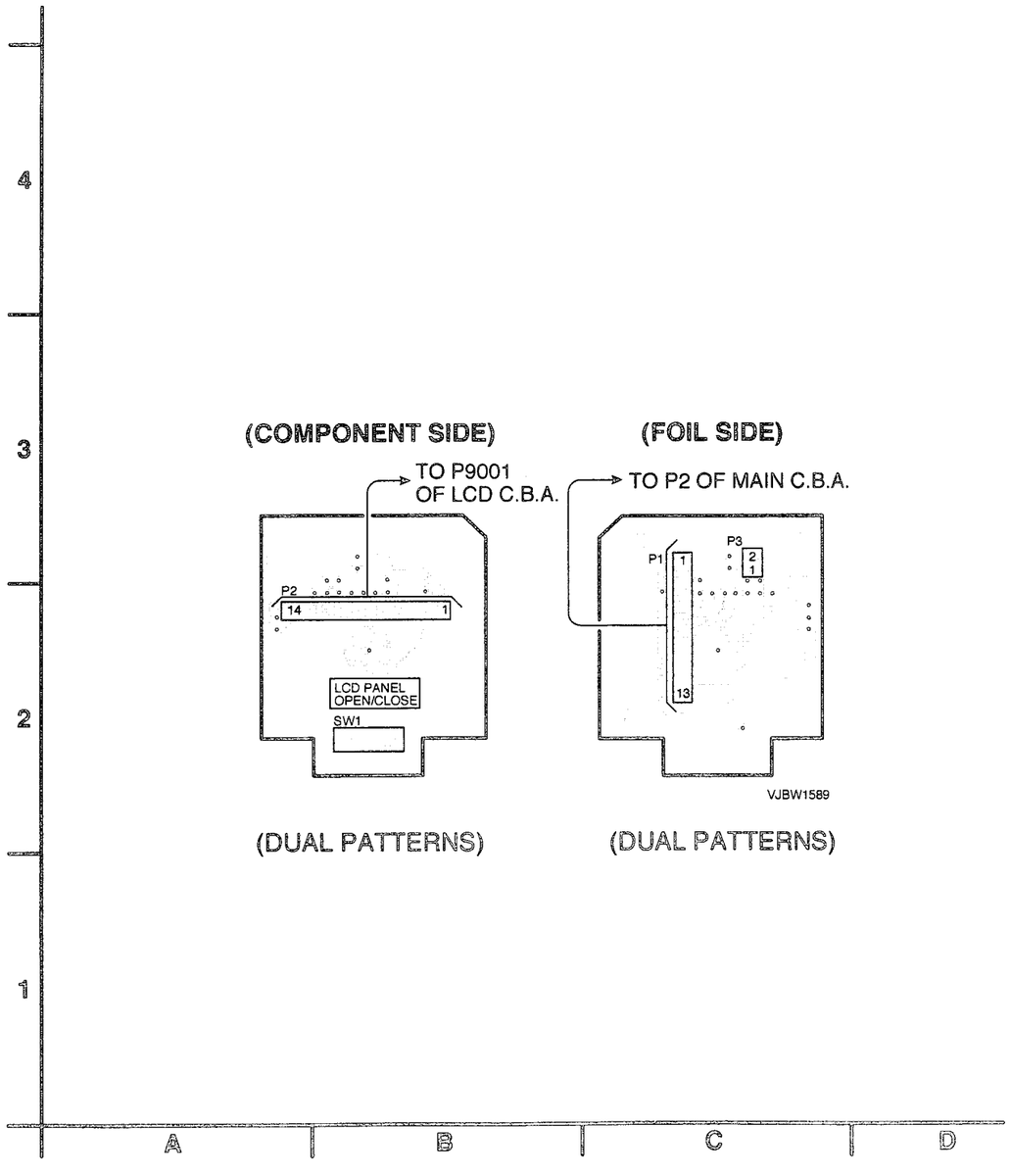
(DUAL PATTERNS)

IMPORTANT SAFETY NOTICE :
COMPONENTS IDENTIFIED BY THE ⚠ SYMBOL HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

LEADLESS COMPONENT PARTS LOCATION GUIDE
LCD C.B.A.

IC1201	**G-3**	R1212	G-4	R9016	H-2	R9098	F-2	**VR9008**	**D-3**	C9009	B-2	C9103	C-2
IC4401	**C-1**	R1213	D-3	R9017	H-2	R9099	F-2	**VR9010**	**D-3**	C9010	B-2	C9104	C-2
IC9001	**H-2**	R1214	D-3	R9018	H-2	R9100	E-2	**VR9011**	**I-2**	C9011	H-2	C9105	H-2
IC9002	**G-3**	R1215	G-3	R9019	H-2	R9101	D-2	**VR9012**	**D-2**	C9012	H-3	C9106	H-2
IC9003	**D-3**	R1216	H-3	R9020	H-2	R9102	F-2	C1201	H-5	C9013	C-3	C9107	H-2
IC9004	**E-2**	R1217	H-3	R9021	H-3	R9103	F-2	C1202	G-4	C9014	B-2	L1201	B-5
IC9005	**G-2**	R1218	H-4	R9024	B-2	R9104	F-1	C1203	G-4	C9015	B-3	L1202	C-4
IC9006	**F-2**	R1219	H-4	R9025	B-2	R9105	F-2	C1204	G-4	C9016	H-2	L1203	D-4
Q1201	**H-5**	R1220	H-4	R9026	B-2	R9106	F-2	C1205	G-3	C9017	H-2	L1204	C-3
Q1202	**H-5**	R1221	H-3	R9027	B-2	R9107	D-2	C1206	G-3	C9019	C-2	L1205	C-4
Q1203	**G-5**	R1222	C-3	R9028	B-2	R9108	D-2	C1207	H-3	C9020	H-2	L1206	H-3
Q1204	**H-5**	R1223	C-4	R9030	H-2	R9109	D-1	C1208	H-3	C9023	H-2	L1207	H-3
Q1205	**H-4**	R1224	G-4	R9031	B-2	R9110	F-1	C1209	G-3	C9024	B-2	L4401	H-2
Q1206	**H-4**	R1225	H-4	R9032	C-2	R9111	F-2	C1210	H-4	C9025	C-2	L4402	C-1
Q1207	**H-4**	R1226	H-4	R9033	C-2	R9112	E-3	C1211	C-5	C9026	C-2	L9001	C-3
Q1208	**H-5**	R1227	H-4	R9034	B-2	R9113	F-2	C1212	C-4	C9027	H-2	L9002	B-2
Q1209	**I-5**	R1228	H-5	R9035	B-2	R9114	D-2	C1213	C-3	C9030	G-2	L9003	C-3
Q1210	**H-5**	R1229	H-5	R9036	B-1	R9115	D-2	C1214	C-4	C9031	G-2	L9004	D-3
Q1211	**H-3**	R1230	H-5	R9037	H-3	R9116	E-2	C1215	G-4	C9032	G-2	L9005	D-5
Q1212	**H-3**	R1232	H-5	R9038	H-2	R9117	E-2	C1216	G-4	C9033	G-2	X9001	B-3
Q1214	**H-5**	R1233	H-5	R9040	G-2	R9122	F-2	C1217	H-4	C9034	G-2	**P9001**	**C-5**
Q1215	**H-4**	R1234	H-5	R9041	G-2	R9123	D-2	C1219	H-4	C9035	G-2	**P9002**	**E-5**
Q1216	**H-4**	R1235	H-5	R9044	G-2	R9124	F-2	C1220	H-5	C9036	D-3	**FP9001**	**E-2**
Q1217	**G-5**	R1236	H-4	R9047	G-2	R9125	F-2	C1221	H-5	C9037	D-3	**FP9002**	**E-4**
Q9001	**G-2**	R1237	H-4	R9050	D-3	R9126	F-2	C1222	G-4	C9038	D-3	**SW1201**	**F-1**
Q9002	**G-2**	R1238	H-4	R9051	D-3	R9127	F-2	C1223	C-3	C9039	D-3	**SW1203**	**G-5**
Q9003	**D-5**	R1239	H-4	R9052	D-2	R9128	D-2	C1224	H-4	C9040	D-3	T1201	C-4
Q9004	**D-5**	R1240	H-4	R9053	D-3	R9129	G-2	C1225	H-4	C9041	D-3	T9001	D-4
Q9005	**E-2**	R1241	H-4	R9054	D-2	R9134	D-2	C1226	C-3	C9042	D-2	**JK4401**	**H-1**
Q9006	**D-2**	R1242	I-3	R9055	D-3	R9135	D-2	C1227	H-4	C9043	G-3	**TP1201**	**D-4**
Q9007	**G-2**	R1243	I-4	R9056	D-3	R9136	F-4	C1228	H-3	C9044	G-3	**TP1203**	**B-3**
D1201	H-5	R1244	H-3	R9057	G-3	R9137	F-4	C1229	C-3	C9045	G-22	**TP1204**	**B-5**
D1202	H-5	R1245	H-5	R9058	D-3	R9138	F-4	C1230	B-3	C9046	C-3	**TP1205**	**B-3**
D1203	G-5	R1246	H-5	R9060	G-2	R9139	F-3	C1231	H-3	C9047	D-3	**TP9001**	**C-2**
D1204	H-4	R1247	H-4	R9061	G-4	R9140	F-3	C1232	H-3	C9048	D-3	**TP9002**	**C-2**
D1205	H-5	R1248	H-4	R9062	G-3	R9141	F-3	C1234	I-3	C9049	D-3	**TP9003**	**C-2**
D1206	H-4	R1249	H-4	R9063	D-3	R9142	F-3	C1235	C-5	C9050	D-3	**TP9004**	**D-2**
D1207	H-3	R1250	H-3	R9066	G-3	R9143	F-3	C1236	H-3	C9051	F-3	**TP9005**	**D-2**
D1208	H-4	R1251	H-3	R9068	G-3	R9144	F-3	C1237	H-4	C9052	D-3	**TP9006**	**D-2**
D1209	H-3	R1252	H-3	R9069	F-3	R9145	F-3	C1238	H-3	C9053	D-2	**TP9007**	**E-3**
D9001	D-3	R1253	H-3	R9070	F-3	R9146	F-3	C4401	C-1	C9054	D-2	**TP9202**	**C-3**
D9002	C-2	R1254	H-5	R9071	D-3	R9147	F-3	C4402	G-1	C9055	E-3		
D9003	G-2	R1255	H-5	R9072	F-3	R9149	D-5	C4403	F-1	C9056	E-3		
D9004	F-2	R1256	H-5	R9073	D-3	R9150	D-4	C4404	C-1	C9057	E-3		
D9005	D-2	R1257	H-4	R9074	D-3	R9151	E-2	C4406	H-1	C9065	D-3		
D9006	F-2	R1258	H-5	R9075	D-3	R9152	D-3	C4407	H-1	C9067	D-4		
D9007	G-1	R1259	H-4	R9076	D-3	R9156	G-3	C4408	H-1	C9068	C-5		
D9008	D-1	R1260	G-5	R9077	D-3	R9165	C-2	C4409	G-1	C9069	E-4		
D9009	E-2	R1261	G-5	R9078	G-2	R9168	H-2	C4410	B-1	C9070	F-2		
D9010	E-3	R1266	H-4	R9079	G-2	R9169	H-2	C4411	B-1	C9071	F-2		
D9011	F-3	R4401	H-1	R9081	G-2	R9170	C-2	C4413	B-2	C9073	D-2		
D9012	E-2	R4402	C-1	R9082	D-2	R9171	C-2	C4414	H-2	C9074	E-2		
D9013	D-3	R4403	C-1	R9083	D-2	R9173	C-2	C4415	B-1	C9075	D-1		
D9017	D-2	R4406	B-2	R9084	G-2	R9174	H-2	C4416	G-1	C9076	F-2		
D9018	D-2	R4407	H-2	R9085	G-2	R9175	H-2	C4417	C-1	C9077	F-2		
D9021	F-4	R4410	B-2	R9086	G-2	R9177	B-2	C4418	C-1	C9078	D-2		
R1201	H-5	R4411	H-1	R9087	G-2	R9178	F-2	C4420	B-1	C9079	D-1		
R1202	H-5	R4413	I-3	R9088	F-2	R9179	G-3	C4421	H-1	C9080	E-2		
R1203	G-4	R4414	H-1	R9089	E-3	R9180	G-3	C4423	H-1	C9081	E-3		
R1204	G-5	R4421	I-3	R9090	E-2	**VR4401**	**G-1**	C4424	G-1	C9082	E-3		
R1205	G-5	R9007	H-2	R9091	D-3	**VR9001**	**B-2**	C9001	H-2	C9084	D-2		
R1206	G-5	R9008	G-2	R9092	E-2	**VR9002**	**B-2**	C9002	C-2	C9085	D-2		
R1207	H-5	R9009	C-2	R9093	F-2	**VR9003**	**B-2**	C9003	H-2	C9089	G-2		
R1208	G-4	R9010	C-2	R9094	F-2	**VR9004**	**B-2**	C9004	C-2	C9090	E-2		
R1209	C-4	R9013	H-2	R9095	F-2	**VR9005**	**I-2**	C9006	H-2	C9091	D-2		
R1210	G-3	R9014	H-2	R9096	F-2	**VR9006**	**I-2**	C9007	H-2	C9096	E-3		
R1211	G-3	R9015	H-2	R9097	F-2	**VR9007**	**D-3**	C9008	B-2	C9099	D-3		

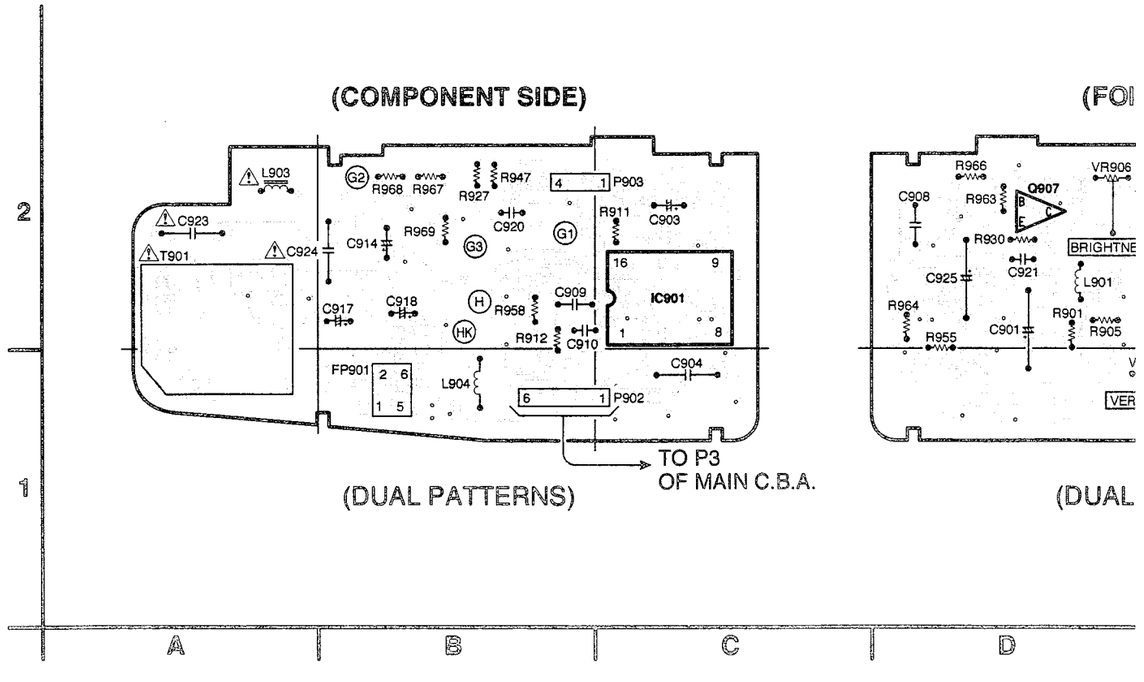
RELAY C.B.A. VEPW1589A1



EVF C.B.A. VEPW1563B1 (MODEL:A)

IMPORTANT SAFETY NOTICE :
COMPONENTS IDENTIFIED BY THE ⚠ SYMBOL HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

PRODUCT SAFETY NOTICE :
THE SYMBOL IN THE EVF SCHEMATIC DIAGRAM, CIRCUIT BOARD LAYOUT, BLOCK DIAGRAM, EXPLODED VIEWS AND REPLACEMENT PARTS LIST INDICATES THAT SPECIAL COMPONENTS HAVE BEEN INCORPORATED FOR PROTECTION FROM X-RADIATION, FIRE AND ELECTRICAL SHOCK HAZARDS.
WHEN SERVICING, IT IS ESSENTIAL THAT THEY BE REPLACED ONLY WITH THE MANUFACTURER'S SPECIFIED PARTS.



EVF C.B.A. VEPW1563B1 (MODEL:A)

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WHEN SERVICING, IT IS ESSENTIAL THAT THEY BE REPLACED ONLY WITH THE MANUFACTURER'S SPECIFIED PARTS.

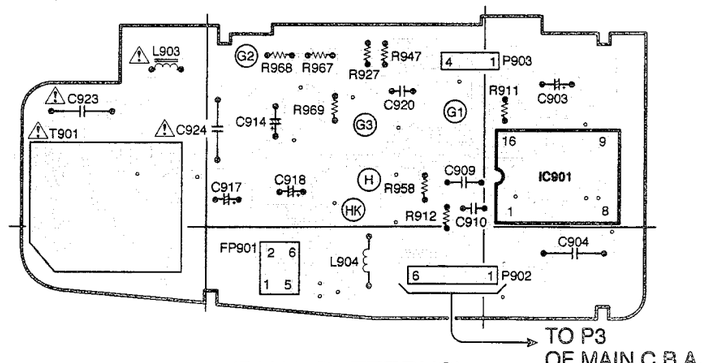
COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-L657	A
PV-L757	B

LEADLESS COMPONENT PARTS LOCATION GUIDE
EVF C.B.A.

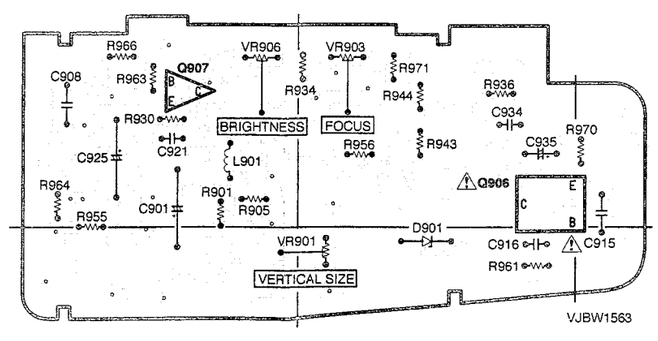
IC901	**C-2**	**VR903**	**E-2**
Q906	**E-2**	**VR906**	**D-2**
Q907	**D-2**	C901	D-2
D901	E-1	C903	C-2
R901	D-2	C904	C-1
R905	D-2	C908	D-2
R911	C-2	C909	B-2
R912	B-2	C910	B-2
R927	B-2	C914	B-2
R930	D-2	C915	F-1
R934	E-2	C916	E-1
R936	E-2	C917	B-2
R943	E-2	C918	B-2
R944	E-2	C920	B-2
R947	B-2	C921	D-2
R955	D-2	C923	A-2
R956	E-2	C924	A-2
R958	B-2	C925	D-2
R961	E-1	C934	E-2
R963	D-2	C935	E-2
R964	D-2	L901	D-2
R966	D-2	L903	A-2
R967	B-2	L904	B-1
R968	B-2	**P902**	**C-1**
R969	B-2	**P903**	**C-2**
R970	E-2	**FP901**	**B-1**
R971	E-2	T901	A-2
VR901	**D-1**		

(COMPONENT SIDE)



(DUAL PATTERNS)

(FOIL SIDE)



(DUAL PATTERNS)

COLOR EVF A／B C.B.A. (MODEL:B)

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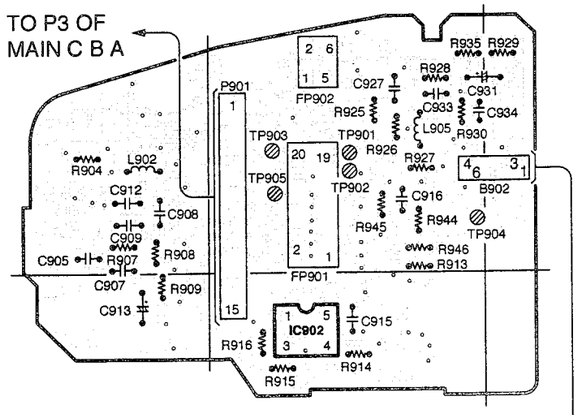
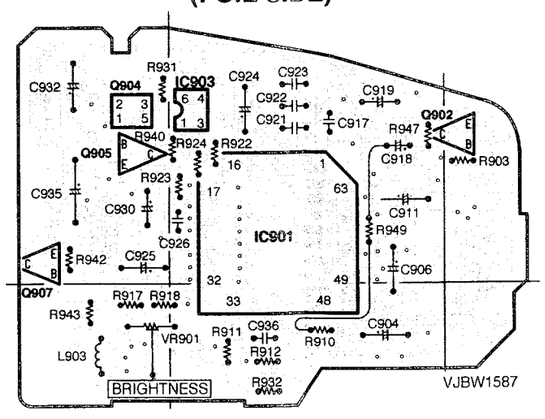
COLOR EVF A C.B.A. VEPW1587C1

(COMPONENT SIDE)



(DUAL PATTERNS)

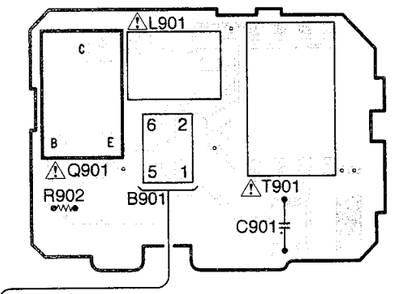
(FOIL SIDE)



(DUAL PATTERNS)

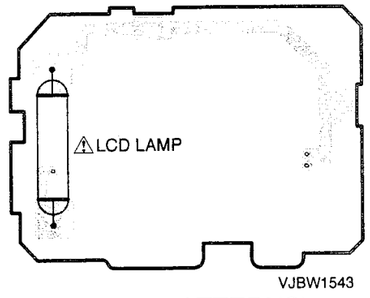
COLOR EVF B C.B.A. VEPW1543A1

(COMPONENT SIDE)



(DUAL PATTERNS)

(FOIL SIDE)



(DUAL PATTERNS)

LEADLESS COMPONENT PARTS LOCATION GUIDE
COLOR EVF A C.B.A.

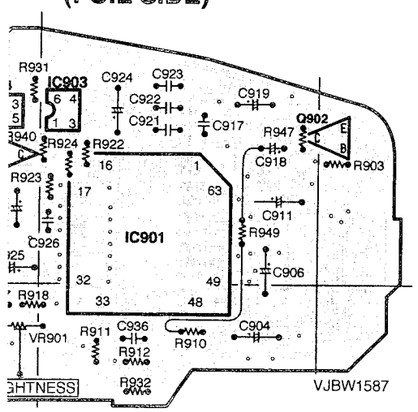
IC901	**D-2**	**VR901**	**D-1**
IC902	**B-1**	C904	D-1
IC903	**D-2**	C905	A-2
Q902	**E-2**	C906	D-2
Q904	**C-2**	C907	A-1
Q905	**C-2**	C908	A-2
Q907	**C-1**	C909	A-2
R903	E-2	C911	D-2
R904	A-1	C912	A-2
R907	A-2	C913	A-1
R908	A-2	C915	B-1
R909	A-1	C916	B-2
R910	D-1	C917	D-2
R911	D-1	C918	D-2
R912	D-1	C919	D-2
R913	B-2	C921	D-2
R914	B-1	C922	D-2
R915	B-1	C923	D-2
R916	B-1	C924	D-2
R917	C-1	C925	C-2
R918	C-1	C926	D-2
R922	D-2	C927	B-2
R923	C-2	C930	C-2
R924	D-2	C931	B-2
R925	B-2	C932	C-2
R926	B-2	C933	B-2
R927	B-2	C934	C-2
R928	B-2	C935	C-2
R929	C-2	C936	D-1
R930	B-2	L902	A-2
R931	C-2	L903	C-1
R932	D-1	L905	B-2
R935	B-2	**B902**	**C-2**
R940	C-2	**P901**	**B-2**
R942	C-2	**FP901**	**B-2**
R943	C-1	**FP902**	**B-2**
R944	B-2	**TP901**	**B-2**
R945	B-2	**TP902**	**B-2**
R946	B-2	**TP903**	**B-2**
R947	D-2	**TP904**	**B-2**
		TP905	**B-2**

COMPARISON CHART
OF MODELS & MARKS

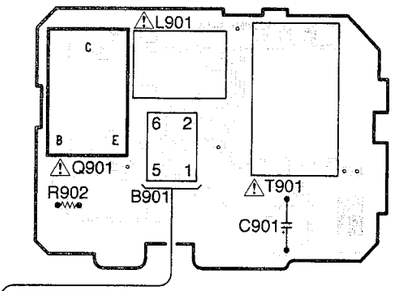
MODEL	MARK
PV-L657	A
PV-L757	B

COLOR EVF B C.B.A. VEPW1543A1

(FOIL SIDE)

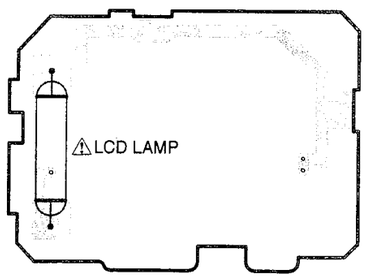


(DUAL PATTERNS)



(DUAL PATTERNS)

(FOIL SIDE)



(DUAL PATTERNS)

D E F G H

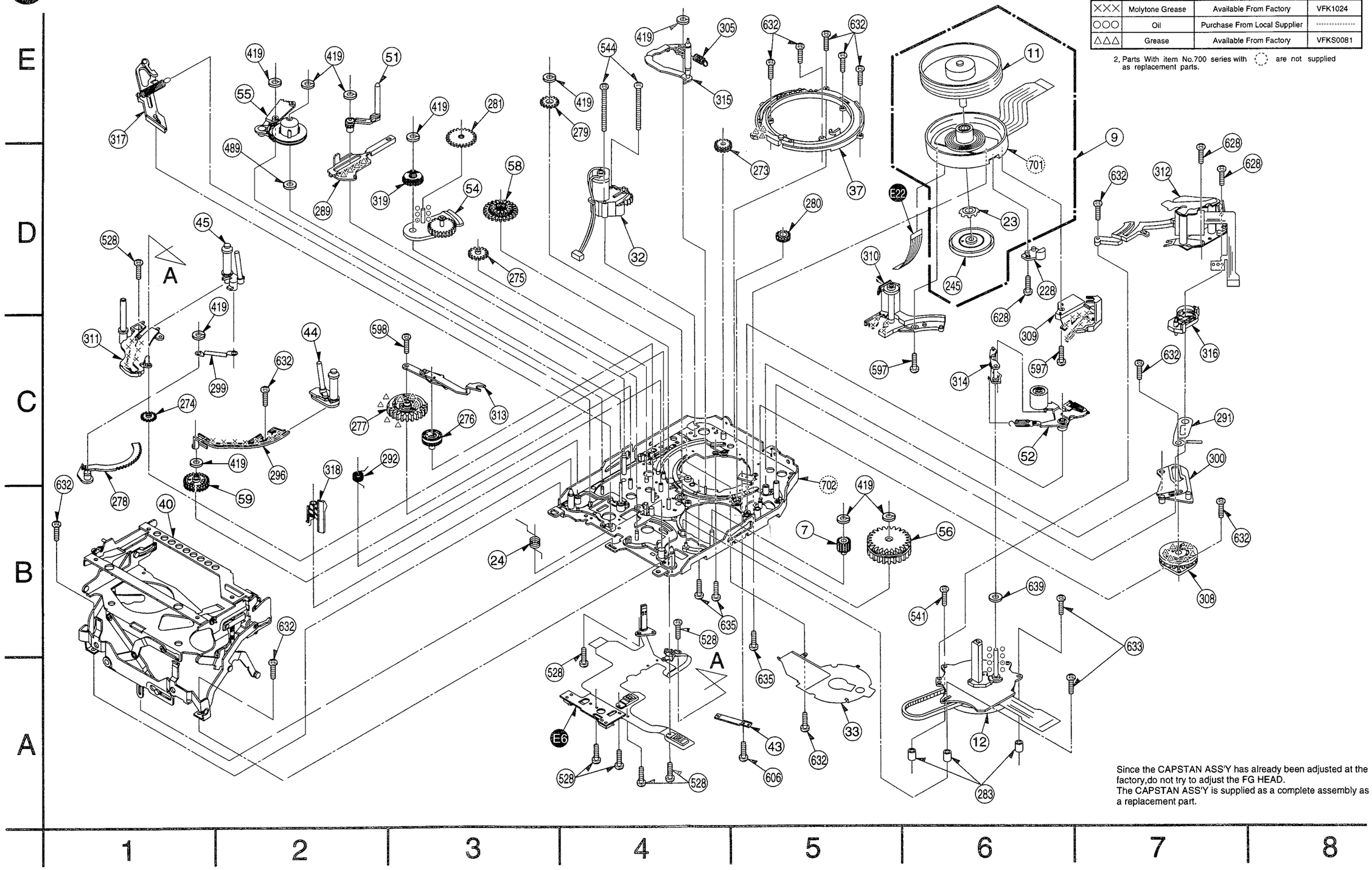
VI. EXPLODED VIEWS & REPLACEMENT PARTS LIST

1 *VCR Mechanism Section*

Note: 1, LUBRICATION POINTS
When the marked parts are replaced, apply the recommended Lubricants or adhesive for better maintenance of the unit.

Mark	Kind of Lubricant	Availability	Part Number
XXX	Molytone Grease	Available From Factory	VFK1024
OOO	Oil	Purchase From Local Supplier	----------
△△△	Grease	Available From Factory	VFKS0081

2, Parts With item No.700 series with ◌ are not supplied as replacement parts.



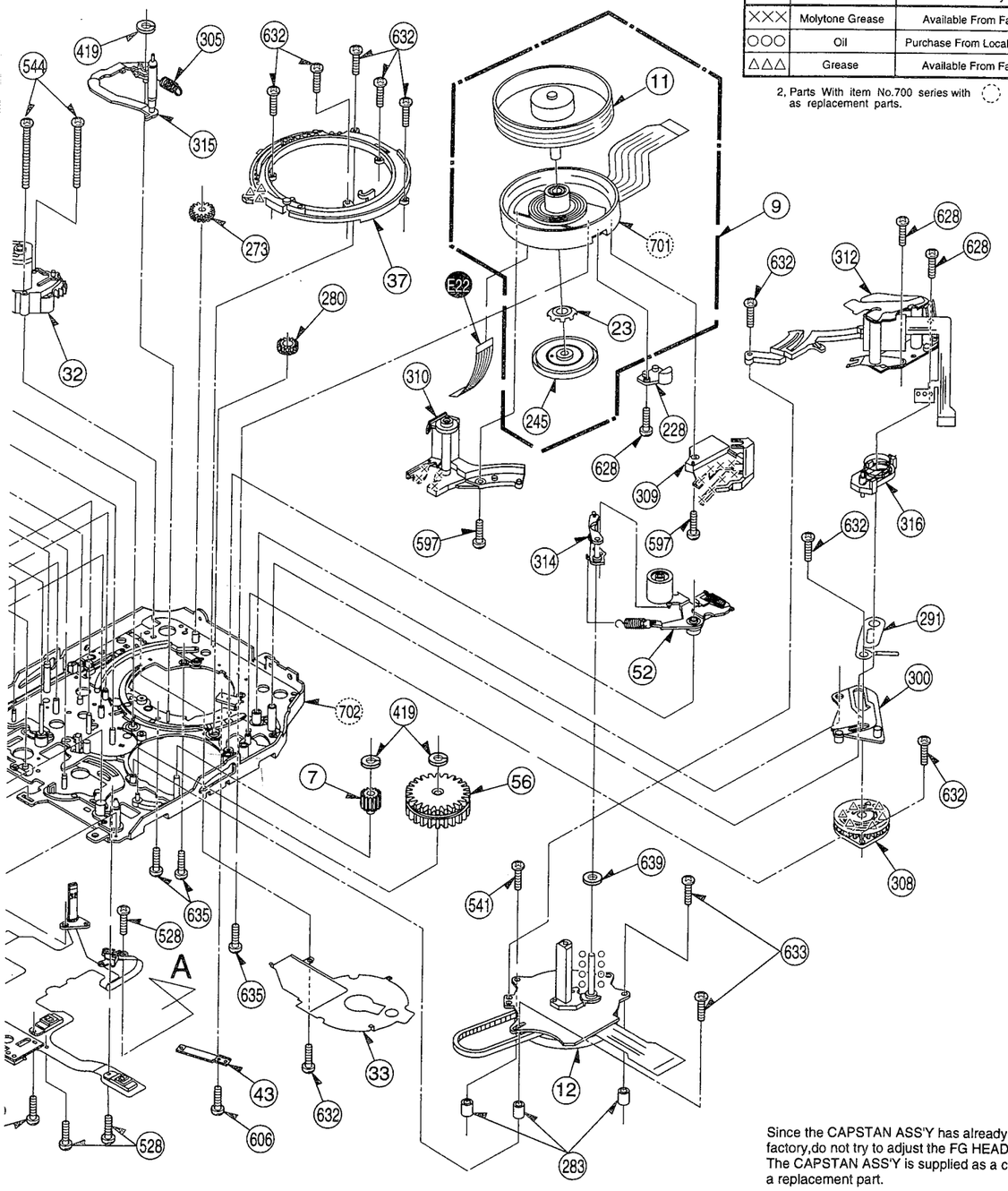
Since the CAPSTAN ASS'Y has already been adjusted at the factory,do not try to adjust the FG HEAD.
The CAPSTAN ASS'Y is supplied as a complete assembly as a replacement part.

S LIST

Note: 1, LUBRICATION POINTS
When the marked parts are replaced, apply the recommended Lubricants or adhesive for better maintenance of the unit.

Mark	Kind of Lubricant	Availability	Part Number
XXX	Molytone Grease	Available From Factory	VFK1024
OOO	Oil	Purchase From Local Supplier	----------
△△△	Grease	Available From Factory	VFKS0081

2, Parts With item No.700 series with ◌ are not supplied as replacement parts.



Since the CAPSTAN ASS'Y has already been adjusted at the factory,do not try to adjust the FG HEAD.
The CAPSTAN ASS'Y is supplied as a complete assembly as a replacement part.

4 5 6 7 8

REPLACEMENT PARTS LIST

Item No.	Description	Pcs/ set	Part No.	Location
7	T REEL GEAR	1	VDGS0376	<B-5>
9	CYLINDER UNIT	1	VEGW0084	<E-7>
11	UPPER CYLINDER UNIT	1	VEHW0026	<E-6>
12	CAPSTAN ASS'Y	1	VEMW0057	<A-6>
23	PRE-LOAD SPRING	1	VMBS0717	<D-6>
24	T SOFT SPRING	1	VMBW0280	<B-3>
32	LOADING MOTOR ASS'Y ,DC0.9W SINGLE	1	VEMW0064	<D-4>
33	SHIELD CASE	1	VSCW0852	<A-5>
37	RING ASS'Y	1	VXAW0148	<D-5>
40	CASSETTE UP ASS'Y	1	VXAW0147-2A	<B-1>
43	EARTH BRUSH	1	VXBS0055	<A-5>
44	T BOAT ASS'Y	1	VXDW0145	<C-2>
45	S BOAT ASS'Y	1	VXDW0128	<D-1>
51	TENSION ARM UNIT	1	VXLW0061	<E-2>
52	PINCH BASE ASS'Y	1	VXLW0052	<C-6>
54	IDLER ASS'Y	1	VXLW0059	<D-3>
55	TENSION RELEASE ARM ASS'Y	1	VXLW0065	<E-2>
56	PLAY CLUTCH UNIT	1	VXPW0014	<B-6>
58	T LOADING GEAR ASS'Y	1	VXYW0149	<D-3>
59	S LOADING GEAR ASS'Y	1	VXYW0150	<B-2>
228	BULGE CHIP	1	VMDW0374	<D-6>
245	ROTOR MAGNET UNIT	1	VXTW0008	<D-6>
273	MOTOR REDUCTION GEAR	1	VDGW0019	<D-5>
274	INTERMEDIATE GEAR A	1	VDGW0020	<C-1>
275	INTERMEDIATE GEAR B	1	VDGW0021	<D-3>
276	T3 CAM GEAR	1	VDGW0022	<C-3>
277	CAM GEAR	1	VDGW0023	<C-1>
278	S RING	1	VDGW0027	<B-1>
279	T INTERMEDIATE GEAR	1	VDGW0032	<E-4>
280	SW INTERMEDIATE GEAR	1	VDGW0033	<D-5>
281	REV IDLER GEAR	1	VDGW0039	<E-3>
283	CAPSTAN SPACER	3	VDPW0009	<A-6>
289	DAMPER RACK,SPCC	1	VMAW0667	<D-2>
291	T3 HEIGHT SPRING	1	VMBW0266	<C-7>
292	TENSION SPRING	1	VMBW0282	<C-2>
296	T RAIL	1	VMDW0389	<C-2>
299	LINK ARM	1	VMLW0042	<C-1>
300	PINCH SWING LEVER	1	VMLW0047	<C-7>
305	T3 SPRING	1	VMBW0269	<E-4>
308	MODE SW	1	VSRW0003	<B-7>
309	T BOAT STOPPER ASS'Y ,PTES	1	VXDW0168	<C-6>
310	B BOAT STOPPER ASS'Y	1	VXDW0170	<D-5>
311	S RAIL UNIT	1	VXDW0144	<C-1>
312	T3 BASE ASS'Y	1	VXKW0060	<D-7>
313	T3 DRAIVE LEVER UNIT	1	VXLW0050	<C-3>
314	T4 ARM UNIT	1	VXLW0051	<C-6>
315	T3 ARM ASS'Y	1	VXLW0055	<E-4>
316	T3 PRESSURE LEVER UNIT	1	VXLW0058	<C-7>
317	EJECT ARM UNIT	1	VXLW0067	<E-1>

Item No.	Description	Pcs/ set	Part No.	Location
318	SAFETY TAB LEVER UNIT	1	VXLW0063	<C-1>
319	CENTER GEAR UNIT	1	VXPW0017	<D-2>
419	CUT WASHER,FE	10	VMX2026	<D-1>
489	WASHER,POLYESTER	1	XWGV15C32G	<---->
528	SCREW,FE	7	VHDW0108	<---->
541	SCREW,FE 1.4X6	1	XQS14+A6	<---->
544	SCREW,STEEL	2	VHDW0112	<---->
597	SCREW,FE	2	VHDS0456	<---->
598	SCREW,FE	1	VHDS0392	<---->
606	SCREW,FE	1	XQN16+C3FN	<---->
628	SCREW,FE	3	XQN16+B3FU	<---->
632	SCREW,FE	12	XQN14+B3	<---->
633	SCREW,FE 1.4X6	2	XQN14+C6FN	<---->
635	SCREW,FE	3	XQN16+C5FU	<---->
639	WASHER,POLYESTER	1	XWGV26D5G	<---->
E6	MECHANISM CHASSIS C.B.A.	1	VEQW0226	<A-4>
E22	CYLINDER CONNECTOR 10P	1	VJBW1584F	<D-5>

※ THIS CUT WASHER IS NOT REUSABLE. IF REMOVED, INSTALL A NEW ONE.

ITEM NUMBERS OF PARTS NOT SUPPLIED

Item No.	Drawing No.	Item No.	Drawing No.	Item No.	Drawing No.	Item No.	Drawing No.	Item No.	Drawing No.
701	1	702	1	703	2	704	2	705	4
706	4	707	4	708	3	709	6	710	6
711	6	712	6	713	2	714	6	715	
716	6	717		718		719		720	
721		722	2	723	5	724		725	
726		727		728		729		730	
731		732		733		734		735	
736		737		738		739		740	

UNUSED ITEM NUMBERS

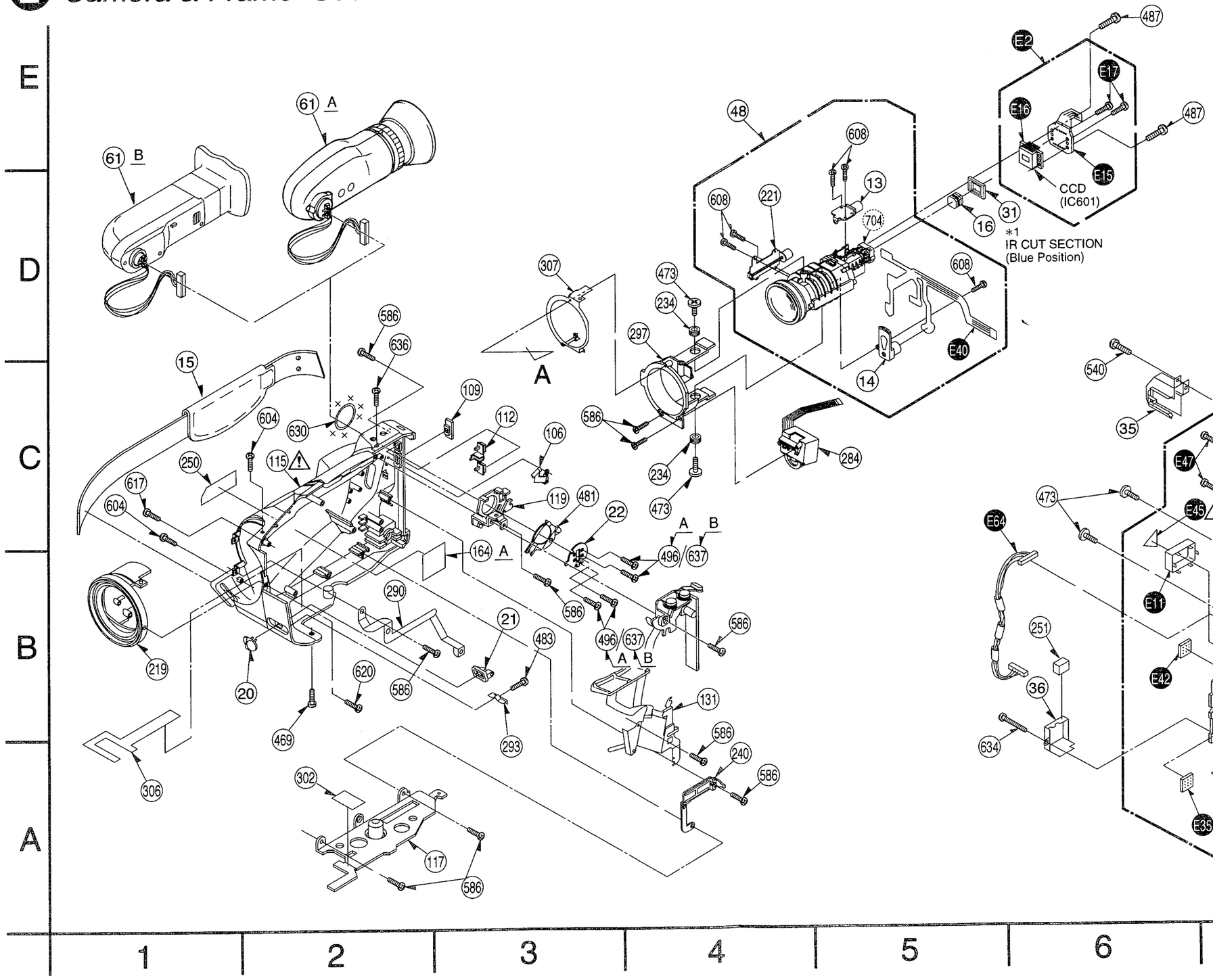
1~6,8,19,25~28,34,38,39,41,46,47,49,53,57,60,62~66,68~79,86,87,90,94~99,
101~105,108,110,113,116,120~127,133~136,139,141,145~147,150,152,153,155,
157,159,165~169,172~195,197~218,220,222~227,230~233,238,241,243,244,248,
249,252~267,270~272,287,288,294,298,303,304,322~330,333,336,338,341,343~351,
353,358~361,368,370~418,420~458,460,462~468,470,471,474~480,484~486,488,
490~494,497~527,529~539,542,543,545~573,575~585,587~591,593~596,
599~603,605,607,609~616,618,619,621~626,629,631,638

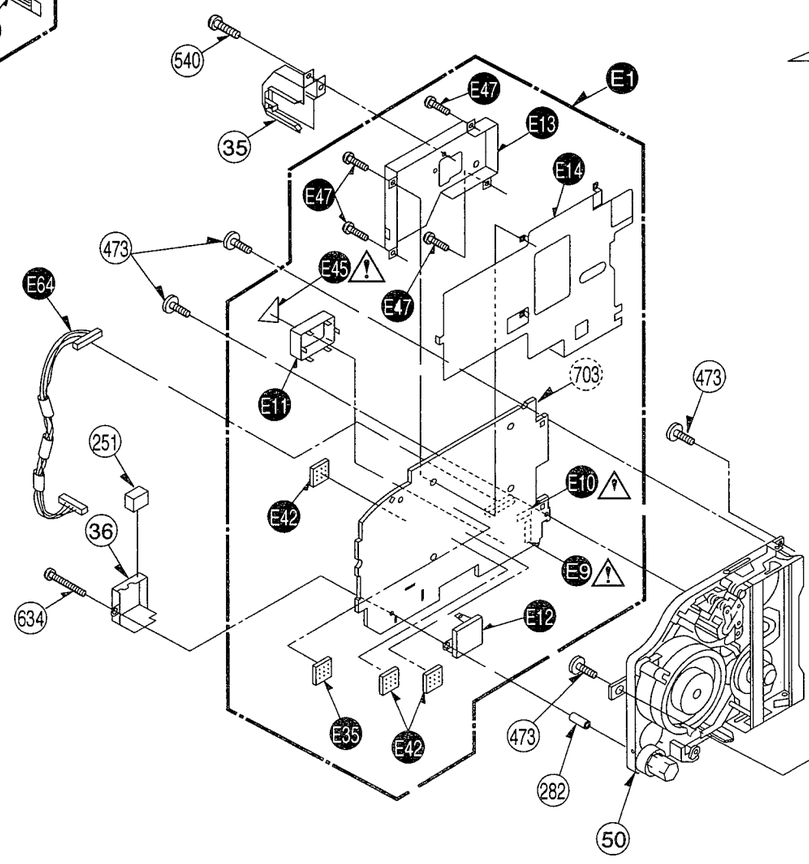
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE ⚠ SYMBOL
HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

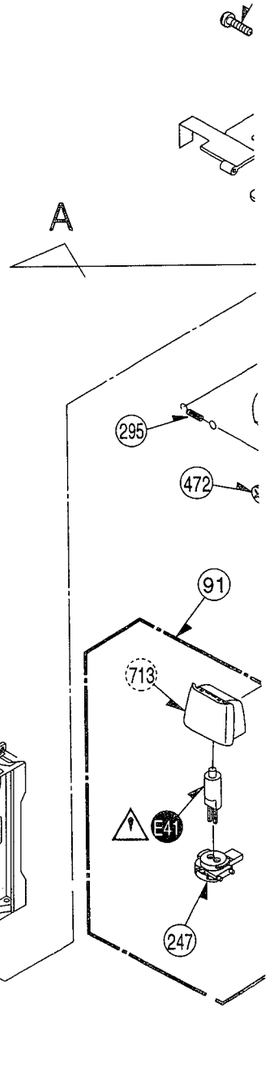
Note :

*1 If OPTICAL FILTER (item 16) is removed from the front of the CCD, replace it with the portion) positioned toward the front of the lens. Ensure that FILTER RUBBER (item 3 before installation of item 16.

2 Camera & Frame Section







IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE ⚠ SYMBOL HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

Note :

*1 If OPTICAL FILTER (item 16) is removed from the front of the CCD, replace it with the IR Cut Section (Blue portion) positioned toward the front of the lens. Ensure that FILTER RUBBER (item 31) is mounted on item 16 before installation of item 16.

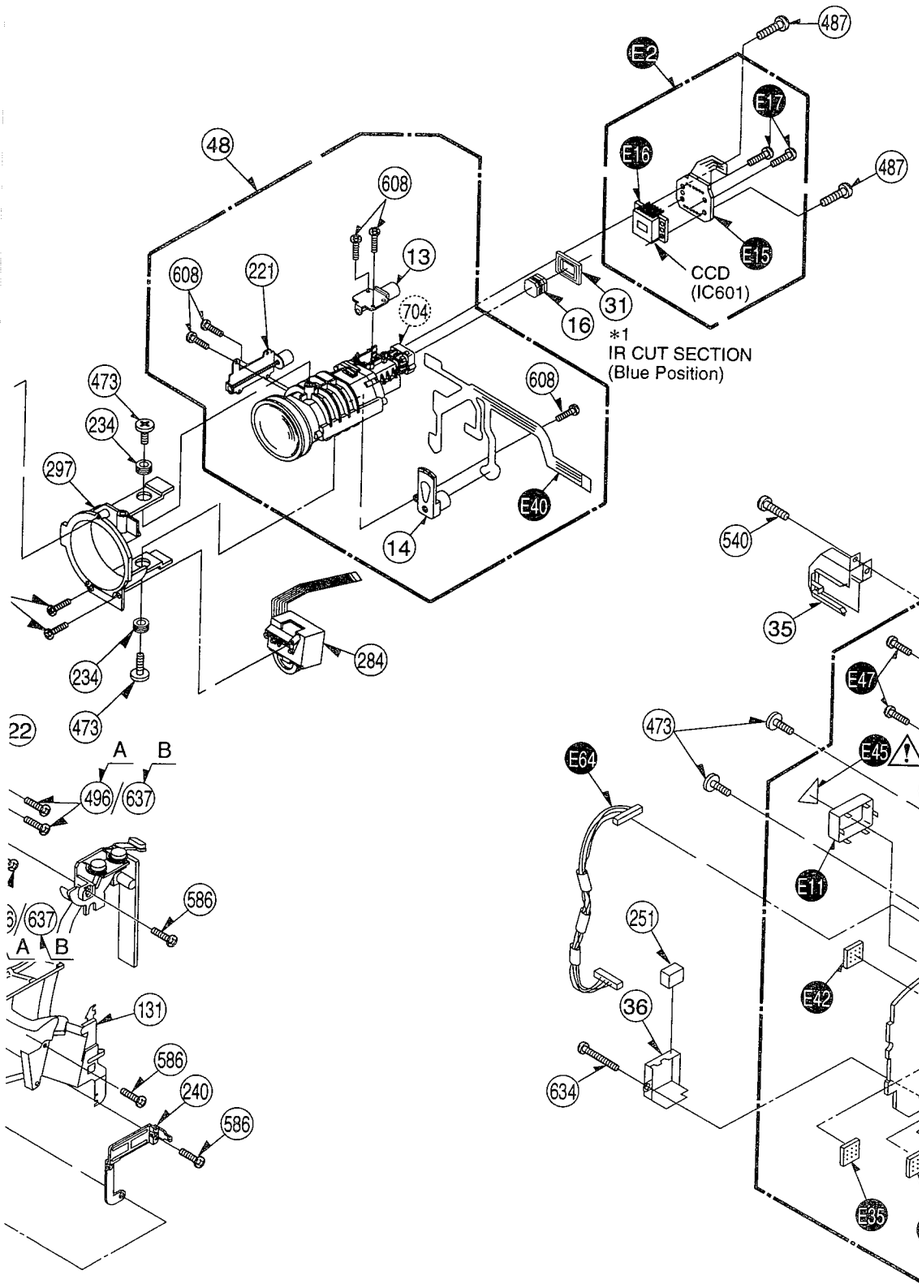
Note: 1, LUBRICATION POINTS
When the marked parts are replaced, apply the recommended Lubricants or adhesive for better maintenance of the unit.

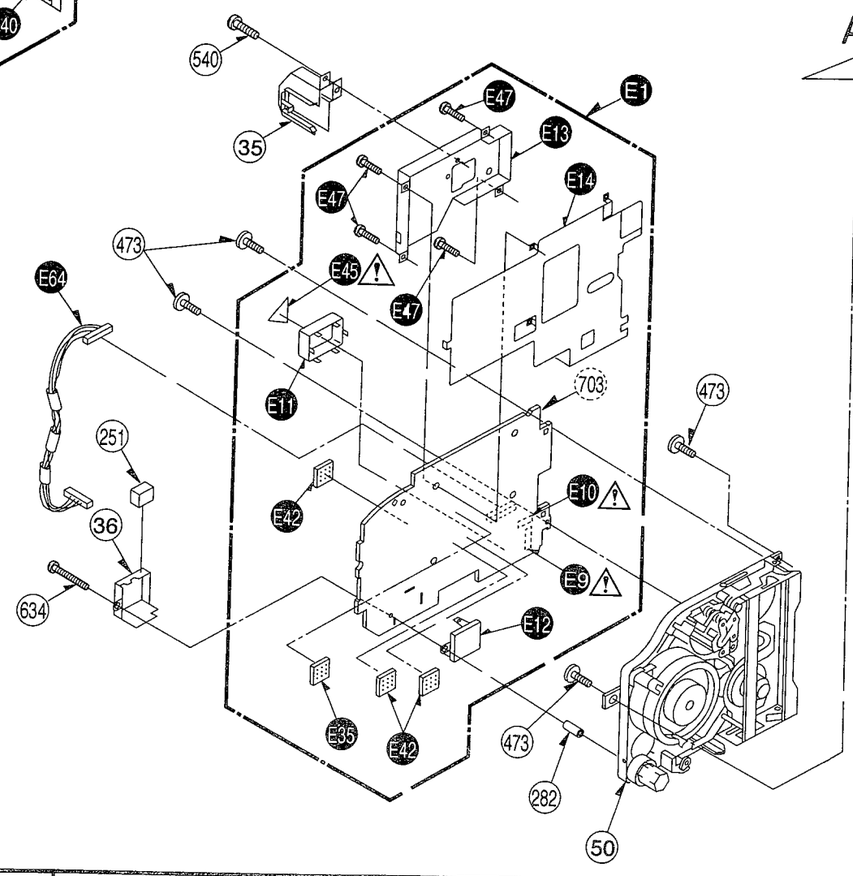
Mark	Kind of Lubricant	Availability	Part Number
XXX	Molytone Grease	Available From Factory	VFK1024
OOO	Oil	Purchase From Local Supplier	----------
△△△	Grease	Available From Factory	VFKS0081

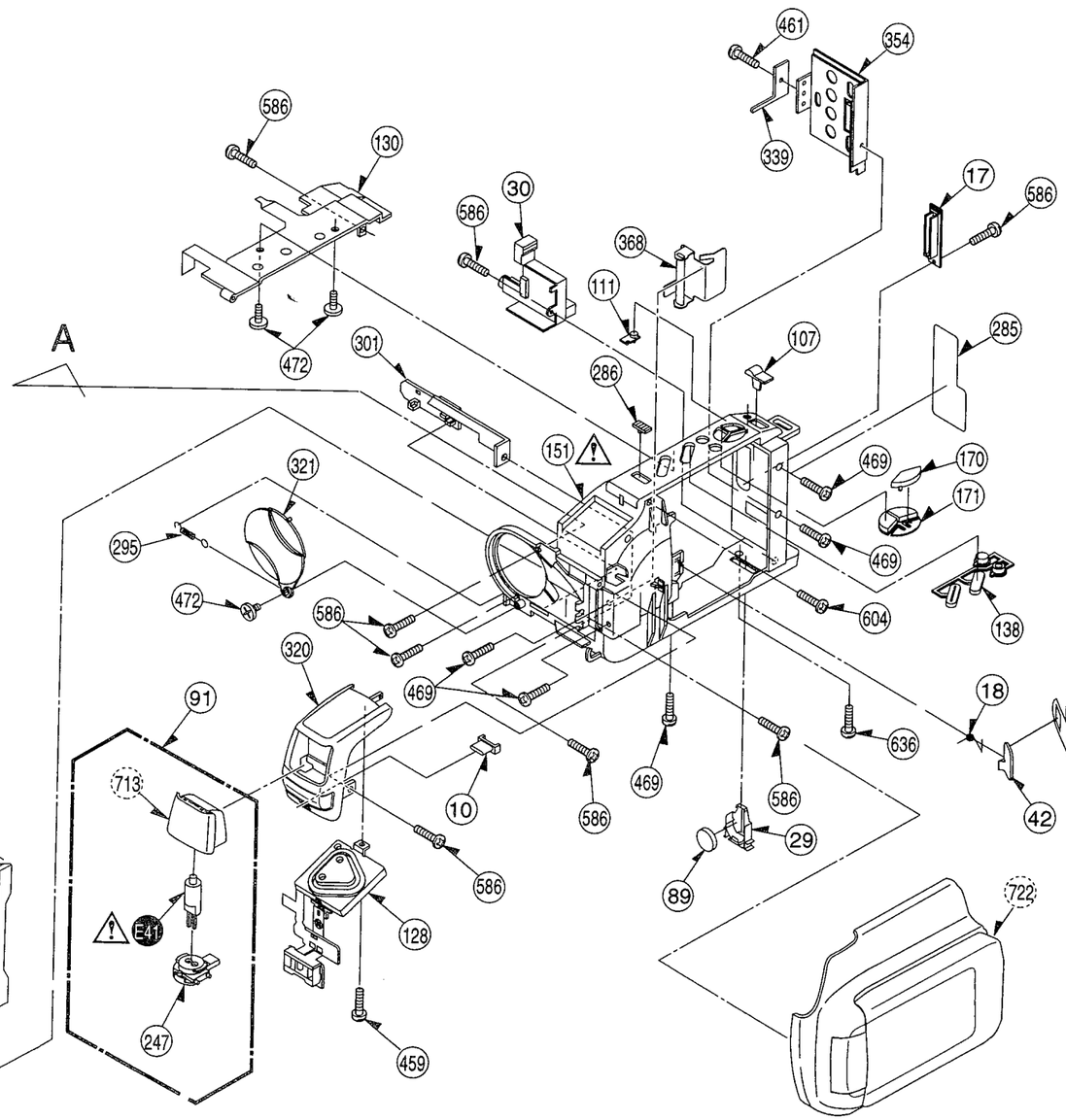
2, Parts With item No.700 series with ◌ are not supplied as replacement parts.

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-L657	A
PV-L757	B







■ REPLACEMENT PARTS LIST

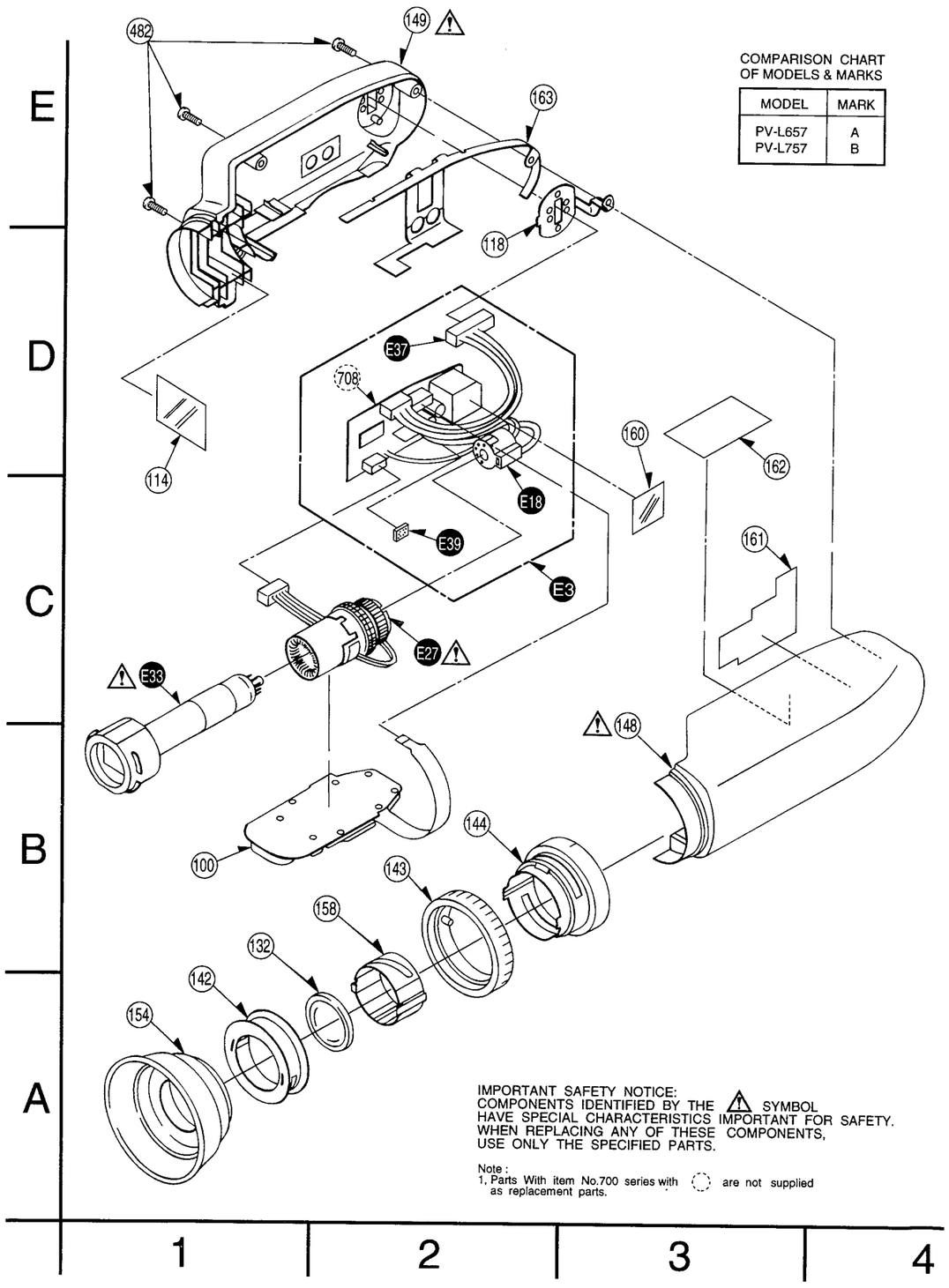
Item No.	Description	Pcs/ set	Part No.	Location
10	TALLY LED PANEL	1	VGLW0058	<B-10>
13	FOCUS MOTOR	1	VEMW0053	<D-5>
14	IRIS MOTOR	1	VEMW0054	<C-5>
15	HAND STRAP,NYLON	1	VFBW0081	<C-1>
16	OPTICAL FILTER	1	VFLW0338	<D-5>
17	EVR COVER	1	VKMW0805	<D-12>
18	PROTECTOR SPRING	1	VMBW0227	<B-12>
20	POWER KNOB	1	VGTW0584	<B-2>
21	POWER KNOB HOLDER	1	VMDW0437	<B-3>
22	SPRING SUPPORTER	1	VMAW0642	<C-3>
29	BACK UP COVER	1	VMDW0341	<B-11>
30	BATTERY CATCHER UNIT	1	VJHW0053W	<D-10>
31	FILTER RUBBER	1	VMGW0198	<D-6>
35	CCD DRIVE SHIELD CASE B	1	VSCW0860	<C-6>
36	HEAD AMP COVER	1	VSCW0827	<B-6>
42	PROTECTOR ARM	1	VMLW0069	<B-12>
48	LENS UNIT	1	VXNW0002	<E-4>
50	VCR MECHANISM CHASSIS ASS'Y	1	VXKW0078	<A-7>
61	EVF UNIT (A)	1	VYKW2737E	<E-2>
	COLOR EVF UNIT (B)	1	VYKW2760E	<E-1>
89	BATTERY UNIT	1	VSBW0004	<B-11>
91	LIGHT UNIT	1	VYKW2230	<B-9>
106	POWER LED PANEL	1	VGLW0052	<C-3>
107	EJECT KNOB	1	VGTW0575	<D-11>
109	TAPE SPEED KNOB	1	VGTW0577	<C-3>
111	DISPLAY KNOB	1	VGUW0157	<D-10>
112	CLOCK SET BUTTON	1	VGUW0164	<C-3>
115	SIDE CASE L,ABS RESIN	⚠1	VKMW1503	<C-2>
117	TRIPOD ANGLE	1	VMAW0671	<A-2>
119	EVF ANGLE	1	VMAW0678	<C-3>
128	MIC UNIT	1	VXMW0089	<A-10>
130	TOP CONNECTOR UNIT	1	VEQW0251	<D-9>
131	SIDE L CONNECTOR UNIT	1	VEQW0261	<B-4>
138	FADE KNOB	1	VGUW0145	<C-12>
151	SIDE CASE R,ABS RESIN	⚠1	VKMW1506	<C-10>
164	CAUTION LABEL (A)	1	VQLS3464	<B-3>
170	EIS KNOB	1	VGUW0147	<C-12>
171	DIGITAL KNOB	1	VGUW0146	<C-12>
219	LENS RING UNIT	1	VYKW2608	<B-1>
221	ZOOM MOTOR	1	VEMW0052	<D-4>
229	TAPE PROTECT SHEET	1	VMZW0623	<B-12>
234	LENS INSULATER A	2	VMTW0023	<---->
240	FIXING ANGLE	1	VMAW0676	<A-4>
247	LAMP SOCKET	1	VEKW1687	<A-9>
250	LIGHT CAUTION LABEL B	1	VQLW1594	<C-1>
251	RUBBER CUSHION-A	1	VMGW0208	<B-6>
282	EARTH SLEEVE	1	VDPW0008	<A-7>
284	FOCUS/POWER UNIT	1	VEQW0230	<C-5>

Item No.	Description	Pcs/ set	Part No.	Location
285	CAUTION LABEL A	1	VQLW1851	<D-12>
286	LIGHT KNOB	1	VGTW0587	<C-10>
290	ESD PLATE	1	VSCW0867	<B-2>
293	SPRING A	1	VMBW0287	<A-3>
295	SPRING B	1	VMBW0289	<C-8>
297	LENS PIECE	1	VMDW0409	<D-4>
301	ARM	1	VMLW0068	<D-9>
302	BARRIER	1	VMZW0626	<A-2>
306	ESD SHEET	1	VSCW0887	<A-1>
307	ESD ANGLE	1	VSCW0866	<D-3>
320	MIC CASE-1 UNIT ,ABS RESIN	1	VYKW2729	<B-9>
321	WING UNIT	1	VYKW2238	<C-9>
339	EJECT PLATE C	1	VMAW0690	<D-11>
354	EJECT PLATE UNIT	1	VXAW0158	<E-11>
368	SHAFT PLATE UNIT	1	VXAW0162	<D-10>
459	SCREW,FE	1	XQN2+BJ4FU	<---->
461	SCREW,FE	1	XQN2+BF3FU	<---->
469	SCREW,FE	6	XQN2+BF4FXK	<---->
472	SCREW,FE	3	VHDW0102	<---->
473	SCREW,FE	6	VHDW0100	<---->
481	WASHER,FE	1	VMBW0253	<---->
483	TAPPING SCREW,FE	1	XQN2+BJ4FXK	<---->
487	SCREW,FE	2	XQN16+AJ6FU	<---->
496	SCREW,FE 2X9 (A)	4	XQN2+C9FU-A	<---->
540	SCREW,FE	1	XQN2+CF3FU	<---->
586	TAPPING SCREW,FE	18	XQN2+BJ5FXK	<---->
604	TAPPING SCREW,FE	3	XQN2+BJ8FXK	<---->
608	SCREW,FE	5	XQN16+CJ6FU	<---->
617	TAPPING SCREW,FE	1	XQN2+BJ10FXK	<---->
620	SCREW,FE	1	XQN2+BJ6FXK	<---->
630	WASHER,NYLON	1	VMXW0175	<---->
634	SCREW,FE	1	XQN14+C8FN	<---->
636	SCREW,FE	2	XQN2+BF6FXK	<---->
637	SCREW,FE (B)	4	XQN2+CF10FU	<---->
E1	MAIN C.B.A. (A)	1	VEPW1566C1	<C-7>
	(B)	1	VEPW1566D1	<C-7>
E2	CCD UNIT	1	VEQW0245	<E-6>
E9	FUSE	⚠ 1	VSFW0004	<B-7>
E10	FUSE	⚠ 1	VSFW0008	<B-7>
E11	POWER SHIELD CASE A,FE	1	VSCW0837	<B-6>
E12	HEAD AMP SHIELD CASE A,FE	1	VSCW0783	<A-7>
E13	DIGITAL SHIELD CASE A,FE	1	VSCW0900	<C-7>
E14	DIGITAL SHIELD CASE B,FE	1	VSCW0902	<C-7>
E15	CCD F.P.C.	1	VEPW1578FA1	<D-6>
E16	HEAT SINK PLATE	1	VSCW0668	<E-6>
E17	TAPPING SCREW,FE	1	XTB2+5FFN	<E-6>
E37	CUSHION	1	VMTS0035M	<A-7>

■ REPLACEMENT PARTS LIST

Item No.	Description	Pcs/ set	Part No.	Location
E40	LENS CONNECTOR	1	VJBW1512F	<D-5>
E41	LAMP	⚠ 1	VLLW0007	<A-9>
E42	CUSHION	3	VMTS0064M	<B-6>
E45	FUSE LABEL	⚠ 1	VGNW0510	<C-6>
E47	SCREW,FE 2X3	4	XQN2+BF3FU	<---->
E64	13P CONNECTOR UNIT	1	VEKW1757	<C-5>

❸ *Electronic Viewfinder Section (Model : A)*



COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-L657 PV-L757	A B

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE ⚠ SYMBOL HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

Note :
1, Parts With item No.700 series with ◌ are not supplied as replacement parts.

■ REPLACEMENT PARTS LIST

Item No.	Description		Pcs/ set	Part No.	Location
100	VCR OPERATION UNIT		1	VEQW0163	<B-1>
114	EVF DUST COVER		1	VKGW1063	<C-1>
118	EVF PLATE		1	VMAW0626	<D-2>
132	EVF LENS		1	VFLW0170	<B-1>
142	EYE CAP HOLDER		1	VKGW1031	<A-1>
143	EYE SIGHT RING		1	VKGW1045	<B-2>
144	LOCK PIECE		1	VKGW1047	<B-2>
148	EVF CASE L, ABS RESIN	⚠	1	VKMW1300	<B-3>
149	EVF CASE R, ABS RESIN	⚠	1	VKMW0744	<E-2>
154	EYE CAP		1	VKUW0110	<A-1>
158	LENS HOLDER		1	VMDW0271	<B-2>
160	INSULATION SHEET		1	VMZW0606	<D-3>
161	CAUTION LABEL B		1	VQLW1199	<C-3>
162	CAUTION LABEL A		1	VQLW1313	<D-3>
163	ESD PLATE		1	VSCW0794	<E-2>
482	TAPPING SCREW, FE		3	XQN2+CJ12FXK	<---->
E3	EVF C.B.A.		1	VEPW1563A1	<C-3>
E18	CRT SOCKET UNIT		1	VEKW1639	<C-2>
E27	DY ASS'Y	⚠	1	ELY05V583A	<C-2>
E33	CRT	⚠	1	M01LGM07WB01	<C-1>
E37	6P CONNECTOR UNIT		2	VEKW1755	<D-2>
E39	CUSHION		1	VMTS0094	<---->

■ REPLACEMENT PARTS LIST

Item No.	Description		Pcs/ set	Part No.	Location
100	VCR OPERATION UNIT		1	VEQW0163	<B-4>
118	EVF PLATE		1	VMAW0677	<A-2>
129	LCD PANEL UNIT		1	MCL0512B01	<D-2>
137	LOCK KNOB		1	VGTW0547	<E-6>
140	LCD HOLDER		1	VKFW0056	<D-3>
148	EVF CASE A, ABS RESIN	⚠	1	VKMW1233	<C-1>
149	EVF CASE B, ABS RESIN	⚠	1	VKMW1234	<B-3>
156	LOCK SPRING		1	VMBW0235	<E-4>
163	ESD PLATE		1	VSCW0869	<A-2>
196	EVF LABEL		1	VQLW1735	<C-1>
235	EVF LENS COVER B		1	VMDW0365	<D-4>
236	EVF LENS B		1	VFLW0371	<D-4>
237	EVF LENS COVER A		1	VMDW0364	<E-3>
242	LCD CUSHION		1	VMGW0204-Y	<D-2>
246	LCD COVER		1	VKFW0057	<D-2>
268	EYE CAP UNIT		1	VYKW2325	<D-2>
482	TAPPING SCREW, FE		2	XQN2+CJ12FXK	<---->
E4	COLOR EVF A C.B.A.		1	VEPW1587C1	<C-2>
E5	COLOR EVF B C.B.A.		1	VEPW1543A1	<C-4>
E19	LCD LAMP	⚠	1	VLLW0008	<C-3>
E36	15P CONNECTOR UNIT		1	VEKW1753	<B-2>
E43	LCD SHIELD CASE, FE		1	VSCW0829	<C-3>

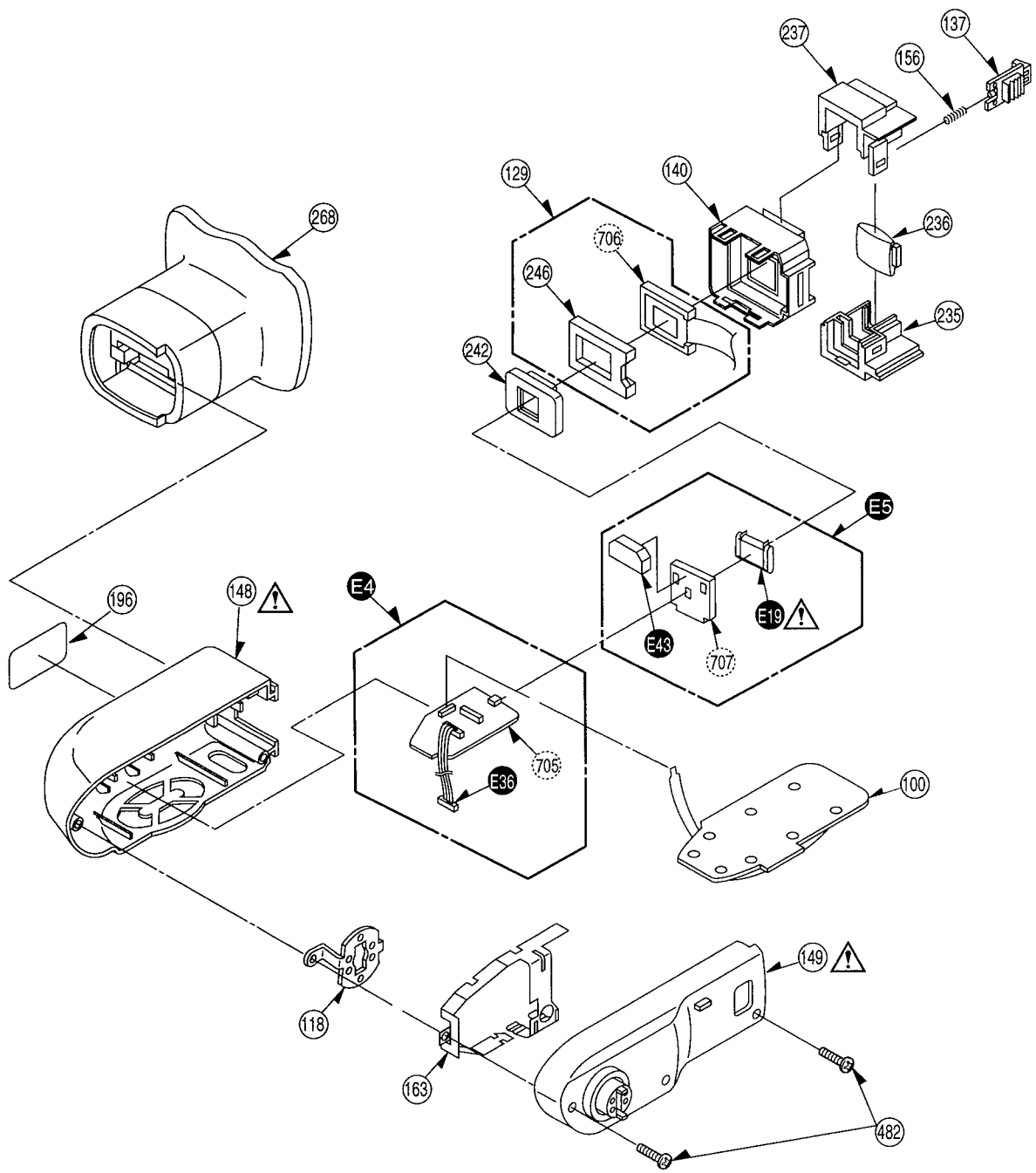
4 Color Electronic Viewfinder Section (Model : B)

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE ⚠ SYMBOL
HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

Note :
1, Parts With item No.700 series with ◌ are not supplied as replacement parts.

COMPARISON CHART
OF MODELS & MARKS

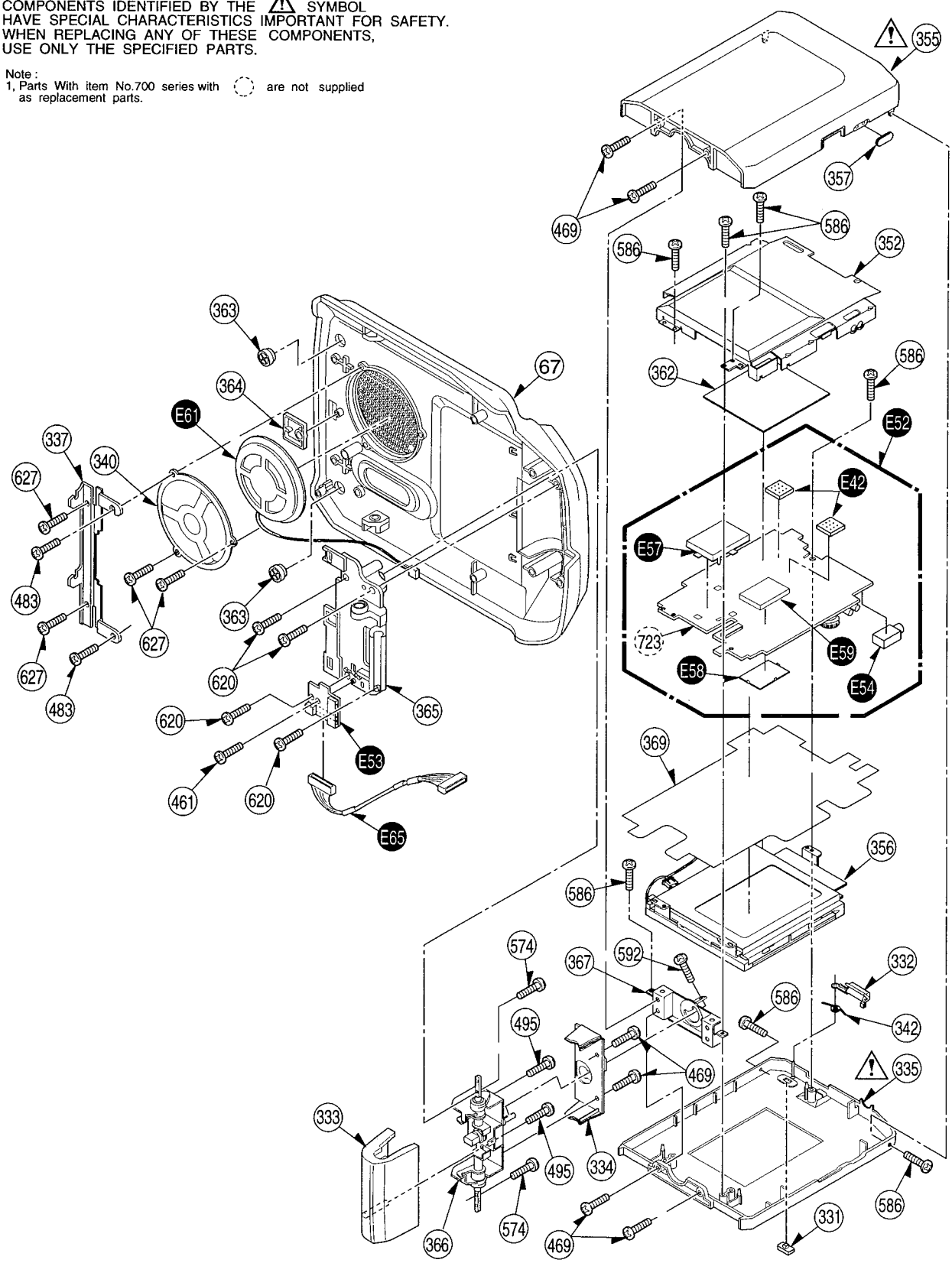
MODEL	MARK
PV-L657	A
PV-L757	B



5 LCD Section

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE ⚠ SYMBOL
HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY THE SPECIFIED PARTS.

Note :
1, Parts With item No.700 series with ◌ are not supplied as replacement parts.



■ REPLACEMENT PARTS LIST

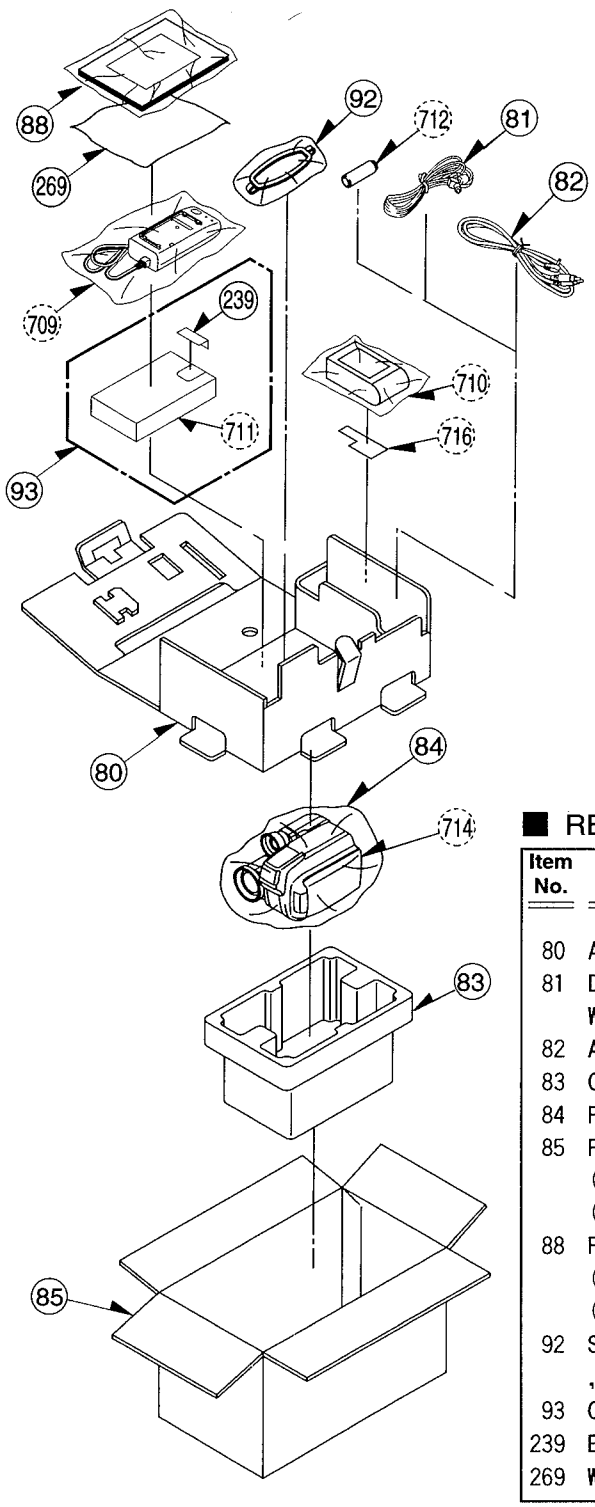
Item No.	Description	Pcs/ set	Part No.	Location
67	CASSETTE COVER UNIT	1	VYKW2745	<D-3>
331	LCD POWER KNOB	1	VGTW0594	<A-4>
332	CANCELLER KNOB	1	VGUW0171	<B-4>
333	FRONT SHAFT CASE			
	,ABS RESIN	1	VKMW1460	<A-2>
334	REAR SHAFT CASE			
	,ABS RESIN	1	VKMW1461	<A-3>
335	LCD BOTTOM CASE			
	,ABS RESIN	⚠ 1	VKMW1511	<B-4>
337	EJECT ANGLE	1	VMAW0696	<D-1>
340	SPEAKER PLATE	1	VMBW0295	<C-1>
342	CANCELLER SPRING	1	VMBW0302	<A-4>
352	LCD EARTH PLATE	1	VSCW0904	<D-4>
355	LCD TOP CASE,ABS RESIN			
	(A)	⚠ 1	VKMW1512	<E-4>
	(B)	⚠ 1	VKMW1514	<E-4>
356	LCD PANEL UNIT	1	VXYW0166	<B-4>
357	RUBBER CAP	1	VMGW0215	<E-4>
362	LCD EARTH BARRIER	1	VMZW0641	<D-3>
363	LOCK RUBBER	2	VMGW0214	<C-2,D-1>
364	LOCK PIECE	1	VGQW0069	<D-1>
365	SHAFT FRAME	1	VMSW0209	<C-2>
366	SHAFT UNIT	1	VXAW0164	<A-2>
367	LCD FRAME	1	VMAW0695	<B-2>
369	LCD BARRIER	1	VMZW0642	<B-3>
461	SCREW,FE 2X3	1	XQN2+BF3FU	<---->
469	SCREW,FE 2X4	6	XQN2+BF4FXK	<---->
483	TAPPING SCREW,FE 2X4	2	XQN2+BJ4FXK	<---->
495	SCREW,FE 2X5	2	XQN2+BJ5FU	<---->
574	TAPPING SCREW,STEEL 2X6	2	XQN2+CF6FXK	<---->
586	TAPPING SCREW,FE 2X5	7	XQN2+BJ5FXK	<---->
592	SCREW,FE 2X5	1	VHDW0113	<---->
620	SCREW,FE 2X6	4	XQN2+BJ6FXK	<---->
627	SCREW,FE 2X3	4	XQN2+BJ3FXK	<---->
E42	CUSHION	2	VMTS0064M	<C-4>
E52	LCD C.B.A.	1	VEPW1585A1	<C-5>
E53	RELAY C.B.A.	1	VEPW1589A1	<B-2>
E54	JACK	1	VJJW0066	<C-4>
E57	LCD SHIELD CASE A,FE	1	VSCW0889	<C-3>
E58	LCD SHIELD CASE B,FE	1	VSCW0892	<C-3>
E59	BACK LIGHT			
	SHIELD CASE,FE	1	VSCW0890	<C-4>
E61	SPEAKER UNIT	1	VEKW1760	<C-1>
E65	14P CONNECTOR UNIT	1	VEKW1758	<B-2>

6 *Packing Parts & Accessories Section*

Note :
1, Parts With item No.700 series with ◌ are not supplied as replacement parts.

COMPARISON CHART
OF MODELS & MARKS

MODEL	MARK
PV-L657	A
PV-L757	B



■ REPLACEMENT PARTS LIST

Item No.	Description	Pcs/ set	Part No.	Location
80	ACCESSORY PACKING CASE	1	VPGW0632	<C-1>
81	DC OUTPUT CORD W/PLUG, 6V	1	VJAW0030	<E-2>
82	AUDIO VIDEO CABLE	1	VJAW0032	<D-2>
83	CUSHION	1	VPNW0036	<B-2>
84	POLY. BAG	1	VPFW0045	<C-2>
85	PACKING CASE, PAPER			
	(A)	1	VPGW0677	<A-1>
	(B)	1	VPGW0686	<A-1>
88	FAN BAG UNIT			
	(A)	1	VQFW0638	<E-1>
	(B)	1	VQFW0660	<E-1>
92	SHOULDER STRAP , POLYPROPYLENE	1	VYCW0149	<E-2>
93	CASSETTE ADAPTOR	1	VYMW0009	<C-1>
239	BATTERY COMPARTMENT LID	1	VKFS1021	<D-1>
269	WIPING CLOTH	1	VFCW0001	<D-1>

ELECTRICAL REPLACEMENT PARTS LIST

Models No. PV-L657, PV-L757

ONLY USE ORIGINAL VIDEO REPLACEMENT PARTS : Maintain original FUNCTION and RELIABILITY of repaired units, only use ORIGINAL REPLACEMENT PARTS which are listed with their part numbers in the parts list section of the Service Manual.

Special Note :
All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling.
techniques described under the "Electrostatically Sensitive(ES) Devices" section of this service manual.

Note :
1. Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
   Components identified by the ⚠ symbol have special characteristics important for safety. When replacing any of these components, use only the specified parts.
3. PRODUCT SAFETY NOTICE:
   The ⚠ symbol in the EVF Schematic Diagrams, Circuit Board Layout, Block Diagram, Exploded Views, and Replacement Parts List indicates that special components have been incorporated for protection from X-RADIATION, FIRE and ELECTRICAL SHOCK hazards. When servicing, it is essential that they be replaced only with the manufacturer's specified parts.
4. Unless otherwise specified ;
   All resistors are in OHMS(Ω), 1/16W, ±5%, carbon, K=1,000Ω, M=1,000KΩ.
   All capacitors are in MICROFARADS(UF), P=uuf, ±10%.
   All coils are in MICROHENRIES(UH), M=103U, ±10%.
5. C.B.A : Circuit Board Assembly.
6. P.C.B : Printed Circuit Board.
7. E.S.D : Electrostatically Sensitive Devices.
8. ITEM NUMBERS WITH CAPITAL LETTER E
   Item numbers with capital letter E (Example : E1,E2,···) in Ref. No. column mean that parts so listed are shown with the E item numbers in the exploded views.
   The E item numbers are also printed on the same page at the top of the column.
9. The parts with "■" are assembly parts or units.
   The parts with "▲" are assembly parts or units which belong to parts with "■" right above them in printed circuit board assembly & unit list.
10. NR : Non Repairable Board Ass'y
11. SERVICE OF CHIP PARTS
    When servicing chip parts, please use a soldering iron of less than 40 watts.
12. RTL : This indicates that the retention time is limited for this item. After the discontinuation of this item in production, it will no longer be available.
13. List of Abbreviations for Part Name & Description :
    MGF CHIP : METAL GLAZE FILM CHIP
    C CHP : CERAMIC CHIP
    COMPLX CMP : COMPLEX COMPONENT
    W FLMPRF : WIREWOUND FLAMEPROOF

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK	MODEL	MARK
PV-L657	A	PV-L757	B

(E1, E2, E3, E4, E5, E52, E53)

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
			PRINTED CIRCUIT BOARD ASSEMBLY		
E1	■	VEPW1566C1	MAIN C.B.A.	1	E.S.D. (RTL)
		(A)			
E1	■	VEPW1566D1	MAIN C.B.A.	1	E.S.D. (RTL)
		(B)			
E2	■	VEQW0245	CCD UNIT	1	E.S.D. (RTL)
E3	■	VEPW1563B1	EVF C.B.A.	1	(RTL)
		(A)			
E4	■	VEPW1587C1	COLOR EVF A C.B.A.	1	E.S.D. (RTL)
		(B)			
E4	■	VEPW1543A1	COLOR EVF B C.B.A.	1	(RTL)
		(B)			
E52	■	VEPW1585A1	LCD C.B.A.	1	E.S.D. (RTL)
E53	■	VEPW1589A1	RELAY C.B.A.	1	(RTL)
	■		**MAIN C.B.A.**		
			INTEGRATED CIRCUITS		
IC1001		BA9710KV	IC, LINEAR POWER CONTROL	1	
IC2001		AN3897FH	IC, LINEAR CYLINDER/CAPSTAN	1	
			MOTOR DRIVE CONTROL		
IC2002		UN224-TX	IC, LINER POWER TRANSISTOR	1	
			MOTOR DRIVE		
IC2004		UN224-TX	IC, LINER POWER TRANSISTOR	1	
			MOTOR DRIVE		
IC3001		AN2401NFH	IC, LINEAR Y/C REC/PB PROCESS	1	
IC3002		MN38663S	IC, CCD 1H DELAY	1	E.S.D.
IC3003		AN3339SB	IC, LINEAR HEAD AMP	1	
IC301		MN67324	IC, LOGIC (OTHER) DIGITAL	1	E.S.D.
			SIGNAL PROCESSOR		

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
IC305		S29355A-7S03	IC, 4K EEP ROM	1	E.S.D.
		(A)			
		S29355A-7S04	IC, 4K EEP ROM	1	E.S.D.
		(B)			
IC306		S80730SLATT1	IC, CMOS RESET	1	E.S.D.
IC307		MC14050BDTEL	IC, CMOS STANDARD LOGIC	1	E.S.D.
IC308		HD3042ST23F	IC, 16BIT MICROCONTROLLER	1	E.S.D.
			CAMERA CONTROL		
IC309		BA10324AFVE1	IC, LINEAR QUAD OPERATION AMP	1	
IC4001		BA7757BK	IC, LINEAR AUDIO REC/PB	1	
			PROCESS		
IC6001		MN675048A4D1	IC, 8BIT MICROCONTROLLER	1	E.S.D.
			SYSTEM CONTROL		
IC6002		S80739SND3T1	IC, CMOS RESET	1	E.S.D.
IC6004		UPD6462GS701	IC, PERIPHERAL MCU CHARACTER	1	E.S.D.
			GENERATOR		
IC6005		S3510AEFJTB	IC, PERIPHERAL MCU CLOCK IC	1	E.S.D.
IC6006		XC62AP4502MR	IC, PERIPHERAL MCU 4.5V	1	E.S.D.
			REGULATOR		
IC6007		BA6417F-T1	IC, LOGIC(OTHER) LOADING MOTOR	1	E.S.D.
			DRIVE		
IC6008		BA7071F-E2	IC, LINEAR SYNC SEPARATOR	1	
IC602		MN5263	IC, CMOS GATE ARRAYS TIMING	1	E.S.D.
			SIGNAL GENERATOR		
IC603		MN3112SA-E1	IC, CMOS STANDARD LOGIC CCD V	1	E.S.D.
			DRIVE		
IC604		AN1358S-E1	IC, LINEAR AMP	1	
IC605		AN2106FAP-V	IC, LINEAR AGC CONTROL	1	
IC606		AN2018S-E1	IC, LINEAR SAMPLING HOLD	1	
IC701, 702		LB1837MTPT1	IC, LINEAR MOTOR DRIVE	2	
			TRANSISTORS		
Q1001		UN5111	CHIP	1	
Q1002		UN5113	CHIP	1	
Q1006		UN5115	CHIP	1	
Q1007		2SB1218A	TRANSISTOR SI PNP CHIP	1	
Q1008		2SB1628-T1ZX	TRANSISTOR SI PNP CHIP	1	
Q1009		MPL1-TL	TRANSISTOR SI PNP CHIP	1	
Q101		XN4501	COMPLX CMP SI NPN CHIP	1	
Q1010		2SB1424T1000	TRANSISTOR SI PNP CHIP	1	
Q1011, 1012		MPL1-TL	TRANSISTOR SI PNP CHIP	2	
Q1013		2SD1328		1	
Q1014		2SD1119		1	
Q1017		2SB709A-RS	CHIP	1	
Q1018		2SB1218A	TRANSISTOR SI PNP CHIP	1	
Q1019		2SB1585	TRANSISTOR SI PNP CHIP	1	
Q102		2SB1585	TRANSISTOR SI PNP CHIP	1	
Q1020		XN4501	COMPLX CMP SI NPN CHIP	1	
Q1021		2SD1119		1	
Q1022		2SB1218A	TRANSISTOR SI PNP CHIP	1	
Q1023		UN5212	CHIP	1	
Q103		2SB1585	TRANSISTOR SI PNP CHIP	1	
Q1031		2SB1218A	TRANSISTOR SI PNP CHIP	1	
Q1032		2SB1073	TRANSISTOR SI PNP CHIP	1	
Q1033		UN5212	CHIP	1	
Q1034		UN5213	CHIP	1	
Q104		XN4501	COMPLX CMP SI NPN CHIP	1	
Q1101		2SA1615-ZT1L	TRANSISTOR SI PNP	1	
Q1102		2SD1819A	TRANSISTOR SI NPN CHIP	1	
Q1103, 1104		2SB1218A	TRANSISTOR SI PNP CHIP	2	
Q1105, 1106		2SD1819A	TRANSISTOR SI NPN CHIP	2	
Q1107		UN5213	CHIP	1	
Q3001		2SB1585	TRANSISTOR SI PNP CHIP	1	
Q3003		2SB1218A	TRANSISTOR SI PNP CHIP	1	
Q3004		2SC3931	CHIP	1	
Q3005		2SD1819A	TRANSISTOR SI NPN CHIP	1	
Q3007		XN4501	COMPLX CMP SI NPN CHIP	1	
Q3008		MSD1328-R	TRANSISTOR SI NPN CHIP	1	
Q301		2SD1819A	TRANSISTOR SI NPN CHIP	1	
Q302		2SC3931	CHIP	1	
Q3026		2SB1218A	TRANSISTOR SI PNP CHIP	1	
Q303		2SB1218A	TRANSISTOR SI PNP CHIP	1	
Q304-307		2SD1819A	TRANSISTOR SI NPN CHIP	4	
Q308, 309		2SD1819A	TRANSISTOR SI NPN CHIP	2	
		(B)			
Q310, 311		2SD1819A	TRANSISTOR SI NPN CHIP	2	
Q4001		MUN5213	TRANSISTOR SI NPN CHIP	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
Q4002		2SB1218A	TRANSISTOR SI PNP CHIP	1	
Q4003,4004		2SD1819A	TRANSISTOR SI NPN CHIP	2	
Q4007		2SB1218A	TRANSISTOR SI PNP CHIP	1	
Q4008		MSD602-R	TRANSISTOR SI NPN CHIP	1	
Q4009		2SD1819A	TRANSISTOR SI NPN CHIP	1	
Q4010		MSB710-R	TRANSISTOR SI PNP CHIP	1	
Q4011,4012		2SD1819A	TRANSISTOR SI NPN CHIP	2	
Q6004		2SB1218A	TRANSISTOR SI PNP CHIP	1	
Q6005		UN5217	CHIP	1	
Q6008		UN5217	CHIP	1	
Q6009		2SD1819A	TRANSISTOR SI NPN CHIP	1	
Q6010		UN5212	CHIP	1	
Q6011		2SB1218A	TRANSISTOR SI PNP CHIP	1	
Q6012		2SK1958	F.E.T.	1	
Q6013		2SD601A	CHIP	1	
Q6018		2SD1819A	TRANSISTOR SI NPN CHIP	1	
Q602		2SA1610	TRANSISTOR SI PNP CHIP	1	
Q6020,6021		2SB1218A	TRANSISTOR SI PNP CHIP	2	
Q6022,6023		2SD1819A	TRANSISTOR SI NPN CHIP	2	
Q6025		UN5113	CHIP	1	
Q603		2SC4176-TB33	TRANSISTOR SI NPN CHIP	1	
Q604		2SD1819A	TRANSISTOR SI NPN CHIP	1	
Q605		2SB1218A	TRANSISTOR SI PNP CHIP	1	
Q606		2SA1610	TRANSISTOR SI PNP CHIP	1	
Q607		2SC4176-TB33	TRANSISTOR SI NPN CHIP	1	
Q608		2SA1610	TRANSISTOR SI PNP CHIP	1	
Q609		2SC4176-TB33	TRANSISTOR SI NPN CHIP	1	
Q610		2SB1218A	TRANSISTOR SI PNP CHIP	1	
Q611-614		2SD1819A	TRANSISTOR SI NPN CHIP	4	
Q615,616		2SB1218A	TRANSISTOR SI PNP CHIP	2	
Q617		2SD1819A	TRANSISTOR SI NPN CHIP	1	
Q6201		2SB1585	TRANSISTOR SI PNP CHIP	1	
Q6202		2SD1819A	TRANSISTOR SI NPN CHIP	1	
Q703		2SD1819A	TRANSISTOR SI NPN CHIP	1	
			DIODES		
D1002		MA3120WA	ZENER 12.0V	1	
D1003		MA111	CHIP	1	
D1005		MA111	CHIP	1	
D1006		MA736		1	
D1007		MA728	CHIP	1	
D1008		MA111	CHIP	1	
D1010		MA720	CHIP	1	
D1011		MA111	CHIP	1	
D1013		MA8068-M	ZENER 6.8V	1	
D1016		MA111	CHIP	1	
D1102		RD12S-B-T1	ZENER CHIP	1	
D1104		MA142WA	CHIP	1	
D3002		MA111	CHIP	1	
D302		MA111	CHIP	1	
D303		MA111	CHIP	1	
		(B)			
D4001		MA111	CHIP	1	
D6001		MA142WK	CHIP	1	
D6005		MA142WA	CHIP	1	
D6006		MA111	CHIP	1	
D6008		MA111	CHIP	1	
D601		MA111	CHIP	1	
D6011		MA111	CHIP	1	
D6015		MA143	CHIP	1	
D602		MA111	CHIP	1	
D6021		MA165		1	
		(B)			
D603		MA142WK	CHIP	1	
D605		MA111	CHIP	1	
D618		MA728	CHIP	1	
D6201		MA143	CHIP	1	
D6203		MA111	CHIP	1	
D6250		MA143	CHIP	1	
			RESISTORS		
R1003		ERJ3GEYJ103X	MGF CHIP 10K	1	
R1004		VRJSD3D2702	METAL FILM CHIP +-0.5% 27K	1	
R1005		VRJSD3D1502	METAL FILM CHIP +-0.5% 15K	1	
R1006,1007		ERJ3GEYJ104X	MGF CHIP 100K	2	
R1008		ERJ3GEYJ222X	MGF CHIP 2200	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
R1009		VRJSD3D1801	METAL FILM CHIP +-0.5% 1800	1	
R101		ERJ3GEYG362V	MGF CHIP +-2% 3600	1	
R1010		VRJSD3D1801	METAL FILM CHIP +-0.5% 1800	1	
R1011		ERJ3GEYJ472X	MGF CHIP 4700	1	
R1012		VRJSD3D5101	METAL FILM CHIP +-0.5% 5100	1	
R1013,1014		ERJ3GEYJ222X	MGF CHIP 2200	2	
R1015		ERJ3GEYJ103X	MGF CHIP 10K	1	
R1016		ERJ3GEYJ223X	MGF CHIP 22K	1	
R1017		ERJ3GEYJ333X	MGF CHIP 33K	1	
R1018,1019		ERJ3GEYJ104X	MGF CHIP 100K	2	
R102		ERJ3GEYG822V	MGF CHIP +-2% 8200	1	
R1020,1021	●	ERJ3GEY0R00X	MGF CHIP 0	2	
R1022		ERJ3GEYJ220V	MGF CHIP 22	1	
R1023		ERJ3GEYJ102X	MGF CHIP 1K	1	
R1024		ERJ3GEYJ104X	MGF CHIP 100K	1	
R1025		ERJ3GEYJ103X	MGF CHIP 10K	1	
R1026,1027		ERJ3GEYJ330V	MGF CHIP 33	2	
R1028,1029	●	ERJ3GEY0R00X	MGF CHIP 0	2	
R103		ERJ3GEYJ473X	MGF CHIP 47K	1	
R1030		ERJ3GEYJ270V	MGF CHIP 27	1	
R1031		VRJSD3D6801	METAL FILM CHIP +-0.5% 6800	1	
R1032		VRJSD3D2401	METAL FILM CHIP +-0.5% 2400	1	
R1033		VRJSD3D22R0	METAL FILM CHIP +-0.5% 22	1	
R1034		VRJSD3D5601	METAL FILM CHIP +-0.5% 5600	1	
R1035		VRJSD3D2701	METAL FILM CHIP +-0.5% 2700	1	
R1036		VRJSD3D68R0	METAL FILM CHIP +-0.5% 68	1	
R1037		VRJSD3D3302	METAL FILM CHIP +-0.5% 33K	1	
R1038		VRJSD3D1001	METAL FILM CHIP +-0.5% 1K	1	
R1039		VRJSD3D2401	METAL FILM CHIP +-0.5% 2400	1	
R104		ERJ3GEYJ472X	MGF CHIP 4700	1	
R1040		VRJSD3D2202	METAL FILM CHIP +-0.5% 22K	1	
R1041		VRJSD3D2201	METAL FILM CHIP +-5% 2200	1	
R1042		VRJSD3D1802	METAL FILM CHIP +-0.5% 18K	1	
R1043		ERJ3GEYJ103X	MGF CHIP 10K	1	
R1044		ERJ6GEYJ331V	MGF CHIP 1/10W 330	1	
R1045		ERJ3GEYJ332X	MGF CHIP 3300	1	
R1046		ERJ3GEYJ102X	MGF CHIP 1K	1	
R105		ERJ3GEYJ473X	MGF CHIP 47K	1	
R1051-1053		ERJ3GEYJ103X	MGF CHIP 10K	3	
R1054		ERJ3GEYJ472X	MGF CHIP 4700	1	
R1055		ERJ3GEYJ103X	MGF CHIP 10K	1	
R1056		ERJ3GEYJ223X	MGF CHIP 22K	1	
R1057		ERJ3GEYJ390V	MGF CHIP 39	1	
R106		VRJSD3D1001	METAL FILM CHIP +-0.5% 1K	1	
R1060		ERJ3GEYJ392X	MGF CHIP 3900	1	
R1061		ERJ3GEYJ103X	MGF CHIP 10K	1	
R1062,1063		VRJSD3D1801	METAL FILM CHIP +-0.5% 1800	2	
R1064		VRJSD3D33R0	METAL FILM CHIP +-0.5% 33	1	
R1065		ERJ3GEYJ223X	MGF CHIP 22K	1	
R1066		ERJ3GEYJ102X	MGF CHIP 1K	1	
R1067		ERJ6GEYJ330V	MGF CHIP 1/10W 33	1	
R1068	●	ERJ6GEY0R00V	MGF CHIP 1/10W 0	1	
R107		VRJSD3D1802	METAL FILM CHIP +-0.5% 18K	1	
R1071		VRJSD3D1000	METAL FILM CHIP +-0.5% 100	1	
R1072		ERJ3GEYJ222X	MGF CHIP 2200	1	
R1074		ERJ3GEYJ821X	MGF CHIP 820	1	
R108		ERJ3GEYJ682V	MGF CHIP 6.8K	1	
R1083		ERJ3GEYJ222X	MGF CHIP 2200	1	
R1084		ERJ3GEYJ103X	MGF CHIP 10K	1	
R1085		ERJ3GEYJ681X	MGF CHIP 680	1	
R1086		ERJ3GEYJ103X	MGF CHIP 10K	1	
R109	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R1090		ERJ3GEYJ104X	MGF CHIP 100K	1	
R1092	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R1101		ERJ3GEYJ223X	MGF CHIP 22K	1	
R1102,1103		ERJ8GEYJ681V	MGF CHIP 1/8W 680	2	
R1104,1105		ERJ8GEYJR56V	MGF CHIP 1/8W 0.56	2	
R1106		ERJ3GEYJ472X	MGF CHIP 4700	1	
R1107		ERJ3GEYJ333X	MGF CHIP 33K	1	
R1108		ERJ3GEYJ102X	MGF CHIP 1K	1	
R1109		ERJ3GEYJ472X	MGF CHIP 4700	1	
R1110,1111		ERJ3GEYJ103X	MGF CHIP 10K	2	
R1112		ERJ3GEYJ154V	MGF CHIP 150K	1	
R1113		ERJ3GEYJ822V	MGF CHIP 8.2K	1	
R2001		ERJ3GEYJ471X	MGF CHIP 470	1	
R2003		ERJ3GEYJ101X	MGF CHIP 100	1	
R2004		ERJ3GEYJ102X	MGF CHIP 1K	1	
R2008		ERJ8GEYJR33V	MGF CHIP 1/8W 0.33	1	

● MARK: 0 OHM RESISTOR
WHEN REPLACING, A 0 OHM REWSISTOR CAN BE SUBSTITUTED BY A WIRE.

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
R2009	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R2010		ERJ3GEYJ102X	MGF CHIP 1K	1	
R2011		ERJ3GEYJ223X	MGF CHIP 22K	1	
R2012		ERJ3GEYJ184V	MGF CHIP 180K	1	
R2013		ERJ3GEYJ332X	MGF CHIP 3300	1	
R2014		ERJ3GEYJ684V	MGF CHIP 680K	1	
R2015		ERJ3GEYJ682V	MGF CHIP 6.8K	1	
R2016		ERJ3GEYJ274V	MGF CHIP 270K	1	
R2017		ERJ3GEYJ394V	MGF CHIP 390K	1	
R2018, 2019		ERJ3GEYJ102X	MGF CHIP 1K	2	
R2021		ERJ3GEYJ103X	MGF CHIP 10K	1	
R2022		ERJ3GEYJ221V	MGF CHIP 220	1	
R2023		ERJ8GEYJR33V	MGF CHIP 1/8W 0.33	1	
R2025		ERJ3GEYJ101X	MGF CHIP 100	1	
R2026		ERJ3GEYJ820V	MGF CHIP 82	1	
R2027		ERJ3GEYJ471X	MGF CHIP 470	1	
R2028, 2029		ERJ3GEYJ391V	MGF CHIP 390	2	
R2030		ERJ3GEYJ471X	MGF CHIP 470	1	
R2031		ERJ3GEYJ101X	MGF CHIP 100	1	
R2032		ERJ3GEYJ103X	MGF CHIP 10K	1	
R2033		ERJ3GEYJ394V	MGF CHIP 390K	1	
R2034	●	ERJ6GEY0R00V	MGF CHIP 1/10W 0	1	
R2035	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R2040	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R2042	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R3001		ERJ3GEYJ472X	MGF CHIP 4700	1	
R3002		ERJ3GEYJ154V	MGF CHIP 150K	1	
R3003		ERJ3GEYJ152V	MGF CHIP 1.5K	1	
R3004		ERJ3GEYJ270V	MGF CHIP 27	1	
R3005		ERJ3GEYJ221V	MGF CHIP 220	1	
R3006		ERJ3GEYJ102X	MGF CHIP 1K	1	
R3008		ERJ3GEYJ122V	MGF CHIP 1.2K	1	
R3009		ERJ3GEYJ392X	MGF CHIP 3900	1	
R301		ERJ3GEYJ122V	MGF CHIP 1.2K	1	
R3010		ERJ3GEYJ122V	MGF CHIP 1.2K	1	
R3011		ERJ3GEYJ271V	MGF CHIP 270	1	
R3015		ERJ3GEYJ393V	MGF CHIP 39K	1	
R3016		ERJ3GEYJ821X	MGF CHIP 820	1	
R3017		ERJ3GEYJ101X	MGF CHIP 100	1	
R3018		ERJ3GEYJ471X	MGF CHIP 470	1	
R3019		ERJ3GEYJ472X	MGF CHIP 4700	1	
R302		ERJ3GEYJ102X	MGF CHIP 1K	1	
R3022, 3023		ERJ3GEYJ102X	MGF CHIP 1K	2	
R3024		ERJ6GEYJ560V	MGF CHIP 1/10W 56	1	
R303		ERJ3GEYJ102X	MGF CHIP 1K	1	
R3031		ERJ3GEYJ821X	MGF CHIP 820	1	
R3032		ERJ3GEYJ102X	MGF CHIP 1K	1	
R3033		ERJ3GEYJ182V	MGF CHIP 1.8K	1	
R3034		ERJ3GEYJ821X	MGF CHIP 820	1	
R3035		ERJ3GEYJ182V	MGF CHIP 1.8K	1	
R3036		ERJ3GEYJ471X	MGF CHIP 470	1	
R3037		ERJ3GEYJ332X	MGF CHIP 3300	1	
R3038		ERJ3GEYJ472X	MGF CHIP 4700	1	
R3039		ERJ3GEYJ101X	MGF CHIP 100	1	
R304		ERJ3GEYJ222X	MGF CHIP 2200	1	
R3040		ERJ3GEYJ222X	MGF CHIP 2200	1	
R3041		ERJ3GEYJ681X	MGF CHIP 680	1	
R3044		ERJ3GEYJ681X	MGF CHIP 680	1	
R3045		ERJ3GEYJ102X	MGF CHIP 1K	1	
R3046		ERJ3GEYJ821X	MGF CHIP 820	1	
R3047, 3048		ERJ3GEYJ681X	MGF CHIP 680	2	
R305		ERJ3GEYJ222X	MGF CHIP 2200	1	
R3050		ERJ3GEYJ821X	MGF CHIP 820	1	
R306		ERJ3GEYJ222X	MGF CHIP 2200	1	
R307		ERJ3GEYJ103X	MGF CHIP 10K	1	
R3076, 3077		ERJ3GEYJ103X	MGF CHIP 10K	2	
R308		ERJ3GEYJ391V	MGF CHIP 390	1	
R309, 310		ERJ3GEYJ102X	MGF CHIP 1K	2	
R3101		ERJ3GEYJ274V	MGF CHIP 270K	1	
R3102		ERJ3GEYJ222X	MGF CHIP 2200	1	
R3103		ERJ3GEYJ102X	MGF CHIP 1K	1	
R3104		ERJ3GEYJ472X	MGF CHIP 4700	1	
R3105		ERJ3GEYJ271V	MGF CHIP 270	1	
R3106		ERJ3GEYJ181V	MGF CHIP 180	1	
R3107		ERJ3GEYJ221V	MGF CHIP 220	1	
R3108		ERJ3GEYJ271V	MGF CHIP 270	1	
R3109		ERJ3GEYJ100V	MGF CHIP 10	1	
R311		ERJ3GEYJ102X	MGF CHIP 1K	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
R3110		ERJ3GEYJ102X	MGF CHIP 1K	1	
R3111, 3112		ERJ3GEYJ122V	MGF CHIP 1.2K	2	
R3113		ERJ3GEYJ221V	MGF CHIP 220	1	
R3114		ERJ3GEYJ271V	MGF CHIP 270	1	
R3115		ERJ3GEYJ222X	MGF CHIP 2200	1	
R3116		ERJ3GEYJ101X	MGF CHIP 100	1	
R312		ERJ3GEYJ102X	MGF CHIP 1K	1	
R3129		ERJ3GEYJ102X	MGF CHIP 1K	1	
R313		ERJ3GEYJ102X	MGF CHIP 1K	1	
R3130		ERJ3GEYJ472X	MGF CHIP 4700	1	
R3133, 3134	●	ERJ3GEY0R00X	MGF CHIP 0	2	
R314		ERJ3GEYJ222X	MGF CHIP 2200	1	
R3140		ERJ3GEYJ122V	MGF CHIP 1.2K	1	
R315		ERJ3GEYJ151V	MGF CHIP 150	1	
R3150		ERJ3GEYJ152V	MGF CHIP 1.5K	1	
R3151		ERJ3GEYJ183X	MGF CHIP 18K	1	
R3152		ERJ3GEYJ221V	MGF CHIP 220	1	
R3153		ERJ3GEYJ272X	MGF CHIP 2700	1	
R3154		ERJ3GEYJ182V	MGF CHIP 1.8K	1	
R3157		ERJ3GEYJ104X	MGF CHIP 100K	1	
R3158		ERJ3GEYJ102X	MGF CHIP 1K	1	
R316		ERJ3GEYJ121V	MGF CHIP 120	1	
R3160		ERJ3GEYJ391V	MGF CHIP 390	1	
R3161		ERJ3GEYJ272X	MGF CHIP 2700	1	
R317-319		ERJ3GEYJ102X	MGF CHIP 1K	3	
R320	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R321		ERJ3GEYJ222X	MGF CHIP 2200	1	
R322		ERJ3GEYJ272X	MGF CHIP 2700	1	
R323		ERJ3GEYJ472X	MGF CHIP 4700	1	
R325, 326	●	ERJ3GEY0R00X	MGF CHIP 0	2	
R328, 329	●	ERJ3GEY0R00X	MGF CHIP 0	2	
R333	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R336-338		ERJ3GEYJ473X	MGF CHIP 47K	3	
R339, 340		ERJ3GEYJ332X	MGF CHIP 3300	2	
R341, 342		ERJ3GEYJ222X	MGF CHIP 2200	2	
R343		ERJ3GEYJ221V	MGF CHIP 220	1	
R344		ERJ3GEYJ152V	MGF CHIP 1.5K	1	
R346		ERJ3GEYJ333X	MGF CHIP 33K	1	
R347		ERJ3GEYJ123X	MGF CHIP 12K	1	
R349		ERJ3GEYJ333X	MGF CHIP 33K	1	
R350		ERJ3GEYJ822V	MGF CHIP 8.2K	1	
R351		ERJ3GEYJ154V	MGF CHIP 150K	1	
R352		ERJ3GEYJ823V	MGF CHIP 82K	1	
R353		ERJ3GEYJ562X	MGF CHIP 5600	1	
R355		ERJ3GEYJ334V	MGF CHIP 330K	1	
R356		ERJ3GEYJ394V	MGF CHIP 390K	1	
R357		ERJ3GEYJ474V	MGF CHIP 470K	1	
R358, 359		ERJ3GEYJ123X	MGF CHIP 12K	2	
R360		ERJ3GEYJ331X	MGF CHIP 330	1	
R361		ERJ3GEYJ102X	MGF CHIP 1K	1	
R362		ERJ3GEYJ101X	MGF CHIP 100	1	
R363		ERJ3GEYJ682V	MGF CHIP 6.8K	1	
R364		ERJ3GEYJ472X	MGF CHIP 4700	1	
R365		ERJ3GEYJ225V	MGF CHIP 2.2M	1	
R366		ERJ3GEYJ102X	MGF CHIP 1K	1	
R367		ERJ3GEYJ223X	MGF CHIP 22K	1	
R368		ERJ3GEYJ273V	MGF CHIP 27K	1	
R369		ERJ3GEYJ393V	MGF CHIP 39K	1	
R370		ERJ3GEYJ472X	MGF CHIP 4700	1	
R371		ERJ3GEYJ101X	MGF CHIP 100	1	
R372		ERJ3GEYJ104X	MGF CHIP 100K	1	
R373		ERJ3GEYJ303V	MGF CHIP 30K	1	
R374		ERJ3GEYJ822V	MGF CHIP 8.2K	1	
R375		ERJ3GEYJ333X	MGF CHIP 33K	1	
R376		ERJ3GEYJ822V	MGF CHIP 8.2K	1	
R377, 378		ERJ3GEYJ333X	MGF CHIP 33K	2	
R379		ERJ3GEYJ822V	MGF CHIP 8.2K	1	
R380	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R381		ERJ3GEYJ272X	MGF CHIP 2700	1	
R382		ERJ3GEYJ102X	MGF CHIP 1K	1	
R383, 384	●	ERJ3GEY0R00X	MGF CHIP 0	2	
R385		ERJ3GEYJ221V	MGF CHIP 220	1	
R386-391	●	ERJ3GEY0R00X	MGF CHIP 0	6	
R393-395		ERJ3GEYJ332X	MGF CHIP 3300	3	
R400	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R4002		ERJ3GEYJ104X	MGF CHIP 100K	1	
R4003		ERJ3GEYJ333X	MGF CHIP 33K	1	
R4004		ERJ3GEYJ123X	MGF CHIP 12K	1	

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Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
R4005		ERJ3GEYJ333X	MGF CHIP 33K	1	
R4006		ERJ3GEYJ105V	MGF CHIP 1M	1	
R4007		ERJ3GEYJ152V	MGF CHIP 1.5K	1	
R4008,4009		ERJ3GEYJ223X	MGF CHIP 22K	2	
R4010		ERJ3GEYJ221V	MGF CHIP 220	1	
R4011		ERJ3GEYJ561X	MGF CHIP 560	1	
R4012		ERJ3GEYJ163V	MGF CHIP 16K	1	
R4013		ERJ3GEYJ223X	MGF CHIP 22K	1	
R4014,4015		ERJ3GEYJ472X	MGF CHIP 4700	2	
R4016		ERJ3GEYJ183X	MGF CHIP 18K	1	
R4017		ERJ3GEYJ100V	MGF CHIP 10	1	
R4018		ERJ3GEYJ682V	MGF CHIP 6.8K	1	
R4019		ERJ3GEYJ103X	MGF CHIP 10K	1	
R402		ERJ3GEYJ432V	MGF CHIP 4300	1	
R4020		ERJ3GEYJ334V	MGF CHIP 330K	1	
R4021		ERJ3GEYJ122V	MGF CHIP 1.2K	1	
R4024		ERJ3GEYJ103X	MGF CHIP 10K	1	
R4026		ERJ3GEYJ682V	MGF CHIP 6.8K	1	
R4027		ERJ3GEYJ153V	MGF CHIP 15K	1	
R4029		ERJ3GEYJ472X	MGF CHIP 4700	1	
R4030		ERJ3GEYJ680V	MGF CHIP 68	1	
R4031		ERJ3GEYJ223X	MGF CHIP 22K	1	
R4032,4033		ERJ3GEYJ222X	MGF CHIP 2200	2	
R4034		ERJ3GEYJ223X	MGF CHIP 22K	1	
R4035		ERJ3GEYJ101X	MGF CHIP 100	1	
R4036		ERJ3GEYJ332X	MGF CHIP 3300	1	
R4037		ERJ3GEYJ561X	MGF CHIP 560	1	
R4043		ERJ3GEYJ561X	MGF CHIP 560	1	
R4044,4045		ERJ3GEYJ473X	MGF CHIP 47K	2	
R4046		ERJ3GEYJ332X	MGF CHIP 3300	1	
R423		ERJ3GEYJ561X	MGF CHIP 560	1	
		(B)			
R424		ERJ3GEYJ473X	MGF CHIP 47K	1	
		(B)			
R425		ERJ3GEYJ223X	MGF CHIP 22K	1	
		(B)			
R429		ERJ3GEYJ562X	MGF CHIP 5600	1	
		(B)			
R430		ERJ3GEYJ104X	MGF CHIP 100K	1	
R431		ERJ3GEYJ101X	MGF CHIP 100	1	
R436		ERJ3GEYJ102X	MGF CHIP 1K	1	
R6001	●	ERJ3GEY0R00X	MGF CHIP 0	1	
		(A)			
R6009,6010		ERJ3GEYJ472X	MGF CHIP 4700	2	
R6011		ERJ3GEYJ473X	MGF CHIP 47K	1	
R6020,6021		ERJ3GEYJ102X	MGF CHIP 1K	2	
R6022		ERJ6GEYJ5R6V	MGF CHIP 1/10W 5.6	1	
R6025,6026		ERJ3GEYJ102X	MGF CHIP 1K	2	
R6027		ERJ3GEYJ272X	MGF CHIP 2700	1	
R6028,6029		ERJ3GEYJ332X	MGF CHIP 3300	2	
R603	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R6030		ERJ3GEYJ272X	MGF CHIP 2700	1	
R6031,6032		ERJ3GEYJ102X	MGF CHIP 1K	2	
R6033		ERJ3GEYJ184V	MGF CHIP 180K	1	
R6034-6037		ERJ3GEYJ102X	MGF CHIP 1K	4	
R6038		ERJ3GEYJ103X	MGF CHIP 10K	1	
R6039		ERJ3GEYJ223X	MGF CHIP 22K	1	
R6040		ERJ3GEYJ561X	MGF CHIP 560	1	
R6041		ERJ3GEYJ473X	MGF CHIP 47K	1	
R6042		ERJ3GEYJ124V	MGF CHIP 120K	1	
R6043,6044		ERJ3GEYJ473X	MGF CHIP 47K	2	
R6045		ERJ3GEYJ103X	MGF CHIP 10K	1	
R6046		ERJ3GEYJ102X	MGF CHIP 1K	1	
R6047-6049		ERJ3GEYJ472X	MGF CHIP 4700	3	
R605		ERJ3GEYJ331X	MGF CHIP 330	1	
R6050		ERJ3GEYJ472X	MGF CHIP 4700	1	
R6051,6052		ERJ3GEYJ102X	MGF CHIP 1K	2	
R6053		ERJ3GEYJ332X	MGF CHIP 3300	1	
R6056		ERJ3GEYJ102X	MGF CHIP 1K	1	
R6058		ERJ3GEYJ102X	MGF CHIP 1K	1	
R606	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R6060-6062		ERJ3GEYJ102X	MGF CHIP 1K	3	
R6063,6064		ERJ3GEYJ563V	MGF CHIP 56K	2	
R6068		ERJ3GEYJ223X	MGF CHIP 22K	1	
R607	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R6072		ERJ3GEYJ392X	MGF CHIP 3900	1	
R6073,6074		ERJ3GEYJ223X	MGF CHIP 22K	2	
R6075		ERJ3GEYJ473X	MGF CHIP 47K	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
R6077		ERJ3GEYJ104X	MGF CHIP 100K	1	
R6079		ERJ3GEYJ472X	MGF CHIP 4700	1	
R608		ERJ3GEYJ101X	MGF CHIP 100	1	
R6080,6081		ERJ3GEYJ472X	MGF CHIP 4700	2	
R6082		ERJ3GEYJ102X	MGF CHIP 1K	1	
R6083-6088		ERJ3GEYJ561X	MGF CHIP 560	6	
R6089		ERJ3GEYJ472X	MGF CHIP 4700	1	
R609	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R6090-6094		ERJ3GEYJ472X	MGF CHIP 4700	5	
R6095		ERJ3GEYJ563V	MGF CHIP 56K	1	
R6096		ERJ3GEYJ104X	MGF CHIP 100K	1	
R6099		ERJ3GEYJ473X	MGF CHIP 47K	1	
R610		ERJ3GEYJ331X	MGF CHIP 330	1	
R6100		ERJ3GEYJ472X	MGF CHIP 4700	1	
R6101		ERJ3GEYJ104X	MGF CHIP 100K	1	
R6102		VRJSD3D1802	METAL FILM CHIP +-0.5% 18K	1	
R6103		ERJ3GEYJ272X	MGF CHIP 2700	1	
R6104		VRJSD3D1002	METAL FILM CHIP +-0.5% 10K	1	
R6107		ERJ3GEYJ473X	MGF CHIP 47K	1	
R6108		ERJ3GEYJ564V	MGF CHIP 560K	1	
R6109		ERJ3GEYJ473X	MGF CHIP 47K	1	
R611		ERJ3GEYJ331X	MGF CHIP 330	1	
R6110-6112		ERJ3GEYJ472X	MGF CHIP 4700	3	
R6113		ERJ3GEYJ272X	MGF CHIP 2700	1	
R6114		ERJ3GEYJ104X	MGF CHIP 100K	1	
R6115,6116		ERJ3GEYJ393V	MGF CHIP 39K	2	
R6119		ERJ8GEYJ680V	MGF CHIP 1/8W 68	1	
R6120		ERJ3GEYJ472X	MGF CHIP 4700	1	
R6129		ERJ3GEYJ473X	MGF CHIP 47K	1	
R613	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R6131,6132	●	ERJ3GEY0R00X	MGF CHIP 0	2	
R6133		ERJ3GEYJ223X	MGF CHIP 22K	1	
R6135	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R6140		ERJ3GEYJ151V	MGF CHIP 150	1	
R6141		ERJ3GEYJ103X	MGF CHIP 10K	1	
R6143,6144		ERJ3GEYJ271V	MGF CHIP 270	2	
R6145		ERJ3GEYJ472X	MGF CHIP 4700	1	
R6146,6147		ERJ3GEYJ222X	MGF CHIP 2200	2	
R6148,6149		ERJ3GEYJ472X	MGF CHIP 4700	2	
R6150		ERJ3GEYJ104X	MGF CHIP 100K	1	
R6151		ERJ3GEYJ103X	MGF CHIP 10K	1	
R6152		ERJ3GEYJ473X	MGF CHIP 47K	1	
R6153		ERJ3GEYJ102X	MGF CHIP 1K	1	
R6154		ERJ3GEYJ682V	MGF CHIP 6.8K	1	
		(B)			
R6169		ERJ3GEYJ473X	MGF CHIP 47K	1	
R617	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R6173		ERJ3GEYJ104X	MGF CHIP 100K	1	
R6174		ERJ3GEYJ473X	MGF CHIP 47K	1	
R6175,6176		ERJ3GEYJ103X	MGF CHIP 10K	2	
R6178		ERJ3GEYJ104X	MGF CHIP 100K	1	
R6179		ERJ3GEYJ102X	MGF CHIP 1K	1	
R618	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R6180		ERJ3GEYJ104X	MGF CHIP 100K	1	
R6181		ERJ3GEYJ224V	MGF CHIP 220K	1	
R6182		ERJ3GEYJ332X	MGF CHIP 3300	1	
		(A)			
		ERJ3GEYJ122V	MGF CHIP 1.2K		
		(B)			
R6184		ERJ3GEYJ682V	MGF CHIP 6.8K	1	
R619	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R620		ERJ3GEYJ182V	MGF CHIP 1.8K	1	
R6202		ERJ3GEYJ394V	MGF CHIP 390K	1	
R6203		ERJ3GEYJ224V	MGF CHIP 220K	1	
R6204		ERJ3GEYJ184V	MGF CHIP 180K	1	
R6206		ERJ3GEYJ224V	MGF CHIP 220K	1	
R6207		ERJ3GEYJ394V	MGF CHIP 390K	1	
R6208		ERJ3GEYJ224V	MGF CHIP 220K	1	
R6209		ERJ3GEYJ225V	MGF CHIP 2.2M	1	
R6210		ERJ3GEYJ561X	MGF CHIP 560	1	
R6215		ERJ3GEYJ152V	MGF CHIP 1.5K	1	
R6217		ERJ3GEYJ272X	MGF CHIP 2700	1	
R6219		ERJ3GEYJ272X	MGF CHIP 2700	1	
R6220		ERJ3GEYJ562X	MGF CHIP 5600	1	
R6221		ERJ3GEYJ222X	MGF CHIP 2200	1	
R6226	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R6230		ERJ3GEYJ392X	MGF CHIP 3900	1	
R624,625		ERJ3GEYJ472X	MGF CHIP 4700	2	

● MARK: 0 OHM RESISTOR

WHEN REPLACING, A 0 OHM REWSISTOR CAN BE SUBSTITUTED BY A WIRE.

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
R6250		ERJ3GEYJ334V	MGF CHIP 330K	1	
R6251		ERJ3GEYJ224V	MGF CHIP 220K	1	
R6252		ERJ3GEYJ104X	MGF CHIP 100K	1	
R626		ERJ3GEYJ183X	MGF CHIP 18K	1	
R627		ERJ3GEYJ222X	MGF CHIP 2200	1	
R628		ERJ3GEYJ182V	MGF CHIP 1.8K	1	
R630		ERJ3GEYJ681X	MGF CHIP 680	1	
R631	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R632		ERJ3GEYJ331X	MGF CHIP 330	1	
R633		ERJ3GEYJ822V	MGF CHIP 8.2K	1	
R634		ERJ3GEYJ103X	MGF CHIP 10K	1	
R635	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R636		ERJ3GEYJ103X	MGF CHIP 10K	1	
R637		ERJ3GEYJ473X	MGF CHIP 47K	1	
R638		ERJ3GEYJ563V	MGF CHIP 56K	1	
R639		ERJ3GEYJ105V	MGF CHIP 1M	1	
R640		ERJ3GEYJ681X	MGF CHIP 680	1	
R641	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R642		ERJ3GEYJ681X	MGF CHIP 680	1	
R643	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R644		ERJ3GEYJ330V	MGF CHIP 33	1	
R645	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R646		ERJ3GEYJ101X	MGF CHIP 100	1	
R648-650		ERJ3GEYJ102X	MGF CHIP 1K	3	
R652		ERJ3GEYJ102X	MGF CHIP 1K	1	
R653		ERJ3GEYJ222X	MGF CHIP 2200	1	
R654		ERJ3GEYJ103X	MGF CHIP 10K	1	
R658		ERJ3GEYJ222X	MGF CHIP 2200	1	
R659,660		ERJ3GEYJ471X	MGF CHIP 470	2	
R662		ERJ3GEYJ272X	MGF CHIP 2700	1	
R663-666		ERJ3GEYJ471X	MGF CHIP 470	4	
R667		ERJ3GEYJ102X	MGF CHIP 1K	1	
R668		ERJ3GEYJ222X	MGF CHIP 2200	1	
R669,670		ERJ3GEYJ102X	MGF CHIP 1K	2	
R671	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R677	●	ERJ3GEY0R00X	MGF CHIP 0	1	
R680		ERJ3GEYJ331X	MGF CHIP 330	1	
R682		ERJ3GEYJ101X	MGF CHIP 100	1	
R701		ERJ3GEYJ332X	MGF CHIP 3300	1	
R702,703		ERJ3GEYJ104X	MGF CHIP 100K	2	
R704		ERJ3GEYJ332X	MGF CHIP 3300	1	
R705		ERJ3GEYJ103X	MGF CHIP 10K	1	
R706		ERJ3GEYJ393V	MGF CHIP 39K	1	
R707		ERJ8GEYJ101V	MGF CHIP 1/8W 100	1	
R708		ERJ3GEYJ393V	MGF CHIP 39K	1	
R709-711		ERJ3GEYJ103X	MGF CHIP 10K	3	
R712-715		ERJ3GEYJ332X	MGF CHIP 3300	4	
R718		ERJ3GEYJ682V	MGF CHIP 6.8K	1	
R719		ERJ3GEYJ183X	MGF CHIP 18K	1	
R720		ERJ3GEYJ114V	MGF CHIP 110K	1	
R721		ERJ3GEYJ183X	MGF CHIP 18K	1	
R722		ERJ3GEYJ114V	MGF CHIP 110K	1	
R723,724		ERJ3GEYJ363V	MGF CHIP 36K	2	
R726		ERJ3GEYJ682V	MGF CHIP 6.8K	1	
R728		ERJ8GEYJ3R9V	MGF CHIP 1/8W 3.9	1	
R729		ERJ8GEYJ5R6V	MGF CHIP 1/8W 5.6	1	
R730		ERJ3GEYJ622V	MGF CHIP 6200	1	
R732		ERJ3GEYJ622V	MGF CHIP 6200	1	
R734		ERJ3GEYJ473X	MGF CHIP 47K	1	
R735,736		ERJ3GEYJ363V	MGF CHIP 36K	2	
R737		ERJ3GEYJ114V	MGF CHIP 110K	1	
R738		ERJ3GEYJ183X	MGF CHIP 18K	1	
R739		ERJ3GEYJ114V	MGF CHIP 110K	1	
R740		ERJ3GEYJ183X	MGF CHIP 18K	1	
R743		ERJ3GEYJ332X	MGF CHIP 3300	1	
R744		ERJ8GEYJ3R3V	MGF CHIP 1/8W 3.3	1	
R745		ERJ8GEYJ3R9V	MGF CHIP 1/8W 3.9	1	
R746-749		ERJ3GEYJ332X	MGF CHIP 3300	4	
R750,751		ERJ3GEYJ105V	MGF CHIP 1M	2	
			CAPACITORS		
C1002,1003		ECUV1E223KBV	C CHIP 25V 0.022	2	
C1004		ECST0JY475	TANTALUM CHIP 6.3V 4.7	1	
C1005		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C1006		VCUS0BC334KB	C CHIP 16V 0.33	1	
C1007		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C1008		ECUV1H331JCV	C CHIP 50V 330P	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
C1009		VCUS0BA105KB	C CHIP 10V 1	1	
C101		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	1	
C1010		ECUV1E223KBV	C CHIP 25V 0.022	1	
C1011		ECUV1H681KBV	C CHIP 50V 680P	1	
C1012		ECUV1H472KBV	C CHIP 50V 0.0047	1	
C1013		ECUV1H103KBV	C CHIP 50V 0.01	1	
C1014-1017		ECUV1H102KBV	C CHIP 50V 0.001	4	
C1018,1019		ECUV1H103KBV	C CHIP 50V 0.01	2	
C1020		ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C1021		ECEV1CA470S	ELECTROLYTIC CHIP 16V 47	1	
C1022		VCUS0FC475MB	C CHIP +-20% 16V 4.7	1	
C1023		VCUS0AA335KB	C CHIP 10V 3.3	1	
C1025		ECUV1H471KBV	C CHIP 50V 470P	1	
C1026		MCUV1C105KBM	C CHIP 16V 1	1	
C1027		ECEV0GA470S	ELECTROLYTIC CHIP 4V 47	1	
C1028		ECUV1H221KBV	C CHIP 50V 220P	1	
C1029		VCUS0AE474KB	C CHIP 16V 0.47	1	
C1030		VCUS0AE105ZF	C CHIP +80%-20% 25V 1	1	
C1034		MCUV1C105KBM	C CHIP 16V 1	1	
C1035		ECEV1CA100S	ELECTROLYTIC CHIP 16V 10	1	
C1036		ECUV1H101JCV	C CHIP +-5% 50V 100P	1	
C1037		MCUV1C105ZFM	C CHIP +80%-20% 16V 1	1	
C1038,1039		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	2	
C1040		ECEV1EA100S	ELECTROLYTIC CHIP 25V 10	1	
C1044		MCUV1E104KBN	C CHIP 25V 0.1	1	
C1045		MCUV1C105ZFM	C CHIP +80%-20% 16V 1	1	
C1046		ECEV1CA220S	ELECTROLYTIC CHIP 16V 22	1	
C1047		ECUV1H331KBV	C CHIP 50V 330P	1	
C1048		MCUV1C105ZFM	C CHIP +80%-20% 16V 1	1	
C1049		ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	1	
C1050		ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	1	
C1052		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	1	
C1053		MCUV1C224KRN	C CHIP 16V 0.22	1	
C1054		MCUV1C105KBM	C CHIP 16V 1	1	
C1056		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C1057		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	1	
C1058		ECST1AX106	TANTALUM CHIP 10V 10	1	
C1060		ECUV1H222KBV	C CHIP 50V 0.0022	1	
C1062		ECUV1H151JCV	C CHIP +-5% 50V 150P	1	
C1063		ECST1CX106	TANTALUM CHIP 16V 10	1	
C1065		ECUV1C104KBV	C CHIP +-10% 16V 0.1	1	
C1101		ECUV1H103KBV	C CHIP 50V 0.01	1	
C1102		ECST0JX226	TANTALUM CHIP 6.3V 22	1	
C1103		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C2001-2003		ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	3	
C2004-2006		ECUV1H103KBV	C CHIP 50V 0.01	3	
C2007		ECEV0JA220S	ELECTROLYTIC CHIP 6.3V 22	1	
C2008		ECUV1E333KBN	C CHIP 25V 0.033	1	
C2011		VCUS0AC334KB	C CHIP 16V 0.33	1	
C2012,2013		ECUV1E473KBN	C CHIP 25V 0.047	2	
C2014		MCUV1E683KBN	C CHIP 25V 0.068	1	
C2015		ECUV1H152KBV	C CHIP 50V 0.0015	1	
C2016		ECUV1H331KBV	C CHIP 50V 330P	1	
C2017		ECST1AY475N	TANTALUM CHIP 10V 4.7	1	
C2018-2020		MCUV1E104KBN	C CHIP 25V 0.1	3	
C2021		ECUV1C473KBV	C CHIP 16V 0.47	1	
C2022		ECUV1E473KBN	C CHIP 25V 0.047	1	
C2023		ECUV1C224KBN	C CHIP +-10% 16V 0.22	1	
C2024		MCUV1C105KBM	C CHIP 16V 1	1	
C2025		ECUV1H103KBN	C CHIP 50V 0.01	1	
C2027-2029		ECUV1C104KBV	C CHIP +-10% 16V 0.1	3	
C2030-2032		MCUV1E104KBN	C CHIP 25V 0.1	3	
C2033		ECEV1CA100S	ELECTROLYTIC CHIP 16V 10	1	
C2034,2035		ECUV1C104KBV	C CHIP +-10% 16V 0.1	2	
C3001		ECEV1EA4R7S	ELECTROLYTIC CHIP 25V 4.7	1	
C3002		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	1	
C3003		ECST0JX226	TANTALUM CHIP 6.3V 22	1	
C3005		ECUV1H220JCV	C CHIP +-5% 50V 22P	1	
C3006		ECUV1H332KBV	C CHIP 50V 0.0033	1	
C3007		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	1	
C3008		ECUV1H103KBV	C CHIP 50V 0.01	1	
C3009		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	1	
C301		ECUV1H270JCV	C CHIP +-5% 50V 27P	1	
C3010		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	1	
C3011		ECUV1H221JCV	C CHIP +-5% 50V 220P	1	
C3012		ECUV1H821KBV	C CHIP 50V 820P	1	
C3013		ECUV1H560JCV	C CHIP +-5% 50V 56P	1	
C3014		ECUV1H331JCV	C CHIP 50V 330P	1	

● MARK: 0 OHM RESISTOR

WHEN REPLACING, A 0 OHM REWSISTOR CAN BE SUBSTITUTED BY A WIRE.

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
C3015		ECUV1H561JCV	C CHIP +-5% 50V 560P	1	
C3017		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	1	
C3018		MCUV1E104KBN	C CHIP 25V 0.1	1	
C3019		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	1	
C302		ECUV1H120JCV	C CHIP +-5% 50V 12P	1	
C3021		ECST0JX226	TANTALUM CHIP 6.3V 22	1	
C3023		ECUV1E473KBN	C CHIP 25V 0.047	1	
C3024		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	1	
C3025		ECUV1H103KBV	C CHIP 50V 0.01	1	
C3028,3029		ECUV1H103KBV	C CHIP 50V 0.01	2	
C303		ECUV1H180JCV	C CHIP +-5% 50V 18P	1	
C3030		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	1	
C3031		MCUV1C224KRN	C CHIP 16V 0.22	1	
C3032		ECUV1H332KBV	C CHIP 50V 0.0033	1	
C3033		ECST1CY225	TANTALUM CHIP 16V 2.2	1	
C3034		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	1	
C3036		ECST1AY475N	TANTALUM CHIP 10V 4.7	1	
C3038		ECUV1H560JCV	C CHIP +-5% 50V 56P	1	
C3039		ECUV1H220JCV	C CHIP +-5% 50V 22P	1	
C304		ECST0JY106	TANTALUM CHIP 6.3V 10	1	
C3040		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	1	
C3042,3043		ECST0JX226	TANTALUM CHIP 6.3V 22	2	
C3045		ECST0JY335	TANTALUM CHIP 6.3V 3.3	1	
C3046		ECEV0GA221S	ELECTROLYTIC CHIP 4V 220	1	
C3047		ECST1AY475N	TANTALUM CHIP 10V 4.7	1	
C3048		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	1	
C305		ECUV1H470JCV	C CHIP +-5% 50V 47P	1	
C3053		ECUV1H390JCV	C CHIP +-5% 50V 39P	1	
C3054		ECUV1H101JCV	C CHIP +-5% 50V 100P	1	
C3055		ECUV1H181JCV	C CHIP +-5% 50V 180P	1	
C3057		ECUV1H180JCV	C CHIP +-5% 50V 18P	1	
C3058		ECUV1H120JCV	C CHIP +-5% 50V 12P	1	
C3059		ECUV1H080CCV	C CHIP +-0.25P 50V 8P	1	
C306		ECST0JY106	TANTALUM CHIP 6.3V 10	1	
C3060		ECUV1H180JCV	C CHIP +-5% 50V 18P	1	
C3061		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	1	
C3066		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	1	
C3068		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	1	
C307		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C3070		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C3072		ECUV1H103KBV	C CHIP 50V 0.01	1	
C3073		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C3074		ECST0JX226	TANTALUM CHIP 6.3V 22	1	
C3075		ECUV1H103KBV	C CHIP 50V 0.01	1	
C3077,3078		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	2	
C3079		ECUV1H102KBV	C CHIP 50V 0.001	1	
C308		ECST0JY106	TANTALUM CHIP 6.3V 10	1	
C3080,3081		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	2	
C3085		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	1	
C309		ECST0JY106	TANTALUM CHIP 6.3V 10	1	
C3098		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	1	
C3099		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	1	
C310		ECST1CY105	TANTALUM CHIP 16V 1	1	
C3101		ECST0JX226	TANTALUM CHIP 6.3V 22	1	
C3103		ECUV1H472KBV	C CHIP 50V 0.0047	1	
C3104		MCUV1E104KBN	C CHIP 25V 0.1	1	
C3105		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	1	
C3107-3109		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	3	
C311		ECST1CY105	TANTALUM CHIP 16V 1	1	
C3110		ECUV1H103KBN	C CHIP 50V 0.01	1	
C3111,3112		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	2	
C3113,3114		ECUV1H103KBN	C CHIP 50V 0.01	2	
C3115,3116		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	2	
C3117		ECUV1H103KBN	C CHIP 50V 0.01	1	
C3118,3119		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	2	
C312		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	1	
C3120		ECUV1H102KBV	C CHIP 50V 0.001	1	
C3121		ECUV1H390JCV	C CHIP +-5% 50V 39P	1	
C3122,3123		ECUV1H470JCV	C CHIP +-5% 50V 47P	2	
C3124		ECUV1H330JCV	C CHIP +-5% 50V 33P	1	
C3125		ECEV1CA100S	ELECTROLYTIC CHIP 16V 10	1	
C3126		ECUV1C104KBV	C CHIP +-10% 16V 0.1	1	
C313		ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	1	
C3132		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	1	
C3135		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	1	
C314		ECST0JY106	TANTALUM CHIP 6.3V 10	1	
C315		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	1	
C316		ECST0JY106	TANTALUM CHIP 6.3V 10	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
C317		ECST0GY106	TANTALUM CHIP 4V 10	1	
C318-320		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	3	
C321		ECST0JY106	TANTALUM CHIP 6.3V 10	1	
C322		ECEV0GA470S	ELECTROLYTIC CHIP 4V 47	1	
C323		ECST0JY106	TANTALUM CHIP 6.3V 10	1	
C326,327		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	2	
C328		ECUV1H221JCV	C CHIP +-5% 50V 220P	1	
		(B)			
C330		ECEV0JA220S	ELECTROLYTIC CHIP 6.3V 22	1	
C331		ECST0JY475	TANTALUM CHIP 6.3V 4.7	1	
C332		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C333		ECUV1H150JCV	C CHIP +-5% 50V 15P	1	
C335		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C336		ECEV0JA220S	ELECTROLYTIC CHIP 6.3V 22	1	
C337,338		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	2	
C339		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	1	
C340		ECUV1H103KBV	C CHIP 50V 0.01	1	
C341		ECUV1H102KBV	C CHIP 50V 0.001	1	
C342		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C345,346		ECUV1H471JCV	C CHIP +-5% 50V 470P	2	
C357		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C359		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C4002		ECEV0JA220S	ELECTROLYTIC CHIP 6.3V 22	1	
C4003		ECST0JY106	TANTALUM CHIP 6.3V 10	1	
C4004		ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	1	
C4005,4006		ECST0JX226	TANTALUM CHIP 6.3V 22	2	
C4007		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	1	
C4008		ECUV1E273KBN	C CHIP 25V 0.027	1	
C4009		ECUV1H822KBV	C CHIP 50V 0.0082	1	
C4010		ECUV1H221KBV	C CHIP 50V 220P	1	
C4011		ECST1CY105	TANTALUM CHIP 16V 1	1	
C4012		ECUV1H152KBV	C CHIP 50V 0.0015	1	
C4013		ECUV1H222KBV	C CHIP 50V 0.0022	1	
C4015		MCUV1C105KBM	C CHIP 16V 1	1	
C4016		ECEV1VS3R3S	ELECTROLYTIC CHIP 35V 3.3	1	
C4017		ECST0JX226	TANTALUM CHIP 6.3V 22	1	
C4018		ECUV1H103KBN	C CHIP 50V 0.01	1	
C4019		ECST1AY475N	TANTALUM CHIP 10V 4.7	1	
C4020		ECUV1H470JCV	C CHIP +-5% 50V 47P	1	
C4021		ECUV1H102KBV	C CHIP 50V 0.001	1	
C4022		ECUT2A472JCW	C CHIP +-5% 100V 4700P	1	
C4023		ECUV1H682KBN	C CHIP 50V 0.0068	1	
C4024		ECUV1E223KBV	C CHIP 25V 0.022	1	
C4025		MCUV1C105KBM	C CHIP 16V 1	1	
C4026		ECST0JX226	TANTALUM CHIP 6.3V 22	1	
C4027		ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C4035,4036		ECST0JY106	TANTALUM CHIP 6.3V 10	2	
C6001		ECUV1H220JCV	C CHIP +-5% 50V 22P	1	
C6002,6003		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	2	
C6004		ECUV1H330JCV	C CHIP +-5% 50V 33P	1	
C6005		ECUV1H070DCV	C CHIP +-5% 50V 7P	1	
C6006		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C6007		ECUV1H120JCV	C CHIP +-5% 50V 12P	1	
C6008		ECUV1H100DCV	C CHIP +-0.5P 50V 10P	1	
C6009		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C6011		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	1	
C6013		ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C6014		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	1	
C6015		ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	1	
C6016		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	1	
C6017		ECUV1H103KBN	C CHIP 50V 0.01	1	
C6018		ECUV1C104KBV	C CHIP +-10% 16V 0.1	1	
C6020		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C6021,6022		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	2	
C6023		ECUV1H102KBV	C CHIP 50V 0.001	1	
C6025		ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	1	
C6028		ECUV1H0R5CCV	C CHIP +-0.25PF 50V 0.5P	1	
C6029		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	1	
C6031,6032		ECUV1H103KBV	C CHIP 50V 0.01	2	
C6039		ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	1	
C604		ECUV1H150JCV	C CHIP +-5% 50V 15P	1	
C6040		ECUV1E223ZFV	C CHIP +80%-20% 25V 0.022	1	
C6041		ECEV1HA010S	ELECTROLYTIC CHIP 50V 1	1	
C6042		MCUV1C105KBM	C CHIP 16V 1	1	
C6043		ECUV1H222KBV	C CHIP 50V 0.0022	1	
C6044		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C6046		MCUV1C105KBM	C CHIP 16V 1	1	
C605		ECEV0GA470S	ELECTROLYTIC CHIP 4V 47	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
C606		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C607-609		ECUV1H150JCV	C CHIP +-5% 50V 15P	3	
C610		ECRJA010A11B	TRIMMER CHIP 10P	1	
C611		ECUV1H080CCV	C CHIP +-0.25P 50V 8P	1	
C612		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C614		ECST1VY684	TANTALUM CHIP 35V 0.68	1	
C615		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	1	
C616		ECUV1C104KBV	C CHIP +-10% 16V 0.1	1	
C617		ECEV1CA100S	ELECTROLYTIC CHIP 16V 10	1	
C618		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	1	
C619		ECEV1CA100S	ELECTROLYTIC CHIP 16V 10	1	
C620		ECUV1H270JCV	C CHIP +-5% 50V 27P	1	
C6202		ECUV1H472KBV	C CHIP 50V 0.0047	1	
C6203		ECUV1H102KBV	C CHIP 50V 0.001	1	
C6205		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	1	
C6206		ECUV1H472KBV	C CHIP 50V 0.0047	1	
C6207		ECUV1H121JCV	C CHIP +-5% 50V 120P	1	
C6208		ECUV1E224ZFN	C CHIP +80%-20% 25V 0.22	1	
C621		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	1	
C6211		ECUV1H103KBV	C CHIP 50V 0.01	1	
C6214		ECUV1H103KBV	C CHIP 50V 0.01	1	
C6219		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	1	
C622		ECUV1H270JCV	C CHIP +-5% 50V 27P	1	
C6220		TCUV1C155ZFM	C CHIP +80%-20% 16V 1.5	1	
C6222		ECST1CY105	TANTALUM CHIP 16V 1	1	
C6223		ECST0JY106	TANTALUM CHIP 6.3V 10	1	
C6225		ECUV1C473KBV	C CHIP 16V 0.47	1	
C623		ECEV1CA100S	ELECTROLYTIC CHIP 16V 10	1	
C624		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	1	
C625		ECUV1H270JCV	C CHIP +-5% 50V 27P	1	
C6250		VCUS0BC334KB	C CHIP 16V 0.33	1	
C6251		ECUV1H181JCN	C CHIP +-5% 50V 180P	1	
C626		ECUV1H270JCV	C CHIP +-5% 50V 27P	1	
C627		ECEV1CA220S	ELECTROLYTIC CHIP 16V 22	1	
C628		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	1	
C629,630		ECUV1H270JCV	C CHIP +-5% 50V 27P	2	
C631		ECUV1C104KBV	C CHIP +-10% 16V 0.1	1	
C633		ECUV1H103KBV	CERAMIC 50V 0.01	1	
C635		ECST1AX106	TANTALUM CHIP 10V 10	1	
C636		ECST0JY106	TANTALUM CHIP 6.3V 10	1	
C637		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C638		ECST0GX226	TANTALUM CHIP 4V 22	1	
C639		ECUV1H270JCV	C CHIP +-5% 50V 27P	1	
C640		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	1	
C641		ECEV1HA2R2S	ELECTROLYTIC CHIP 50V 2.2	1	
C642		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	1	
C643		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C644		ECUV1H220JCV	C CHIP +-5% 50V 22P	1	
C645		ECUV1H070DCV	C CHIP +-5% 50V 7P	1	
C646		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	1	
C647		ECST0JY106	TANTALUM CHIP 6.3V 10	1	
C648,649		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	2	
C651		ECUV1H102KBV	C CHIP 50V 0.001	1	
C662		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	1	
C701,702		ECUV1H392KBV	C CHIP 50V 0.0039	2	
C703,704		ECEV1CA4R7N	ELECTROLYTIC CHIP 16V 4.7	2	
C705		ECEV1CA470S	ELECTROLYTIC CHIP 16V 47	1	
C706,707		ECEV1CA4R7N	ELECTROLYTIC CHIP 16V 4.7	2	
C708		ECEV1CA470S	ELECTROLYTIC CHIP 16V 47	1	
C710		ECST0JY106	TANTALUM CHIP 6.3V 10	1	
			FILTERS		
FL3001		VLFW0041	LC TRAP 4.84MHz	1	
FL601		VLFW0037T	LOW PASS FILTER 6MHz	1	
FL602		VLDW0009T	DELAY LINE 100ns	1	
			COILS		
L1001		N06DA100K	SWITCHING COIL	1	
L1002		ELL04T048R	CHOKE	1	
L1003,1004		ELL04T049R	CHOKE	2	
L1005		N06DA100K	SWITCHING COIL	1	
L1006		VL00319K100	CHIP 10	1	
L1007		VLJW3TC100KT	CHIP 10	1	
L1008		N06DA100K	SWITCHING COIL	1	
L1009		VL00163K101	CHIP 100	1	
L1011		VL00319K220	CHIP 22	1	

(E9,E10)

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
L1012		VLJW2YL101JT	CHIP 100	1	
L1013		VL00319K101	CHIP 100	1	
L1014,1015		VLJW3TC100KT	CHIP 10	2	
L3001-3004		VLJW3TC470KT	CHIP 47	4	
L3006,3007		VLJW3TC470KT	CHIP 47	2	
L3008		VL00319K101	CHIP 100	1	
L3009		VL00426J820	CHIP 82	1	
L301		VL00163K150	CHIP 15	1	
L3011		VL00426J470	CHIP 47	1	
L3012		VL00426J120	CHIP 12	1	
L3013		VL00163J331	CHIP +-5% 330	1	
L3014		VL00426J180	CHIP 18	1	
L3015		VL00163J331	CHIP +-5% 330	1	
L3016		VL00426J470	CHIP 47	1	
L3017		VL00163J331	CHIP +-5% 330	1	
L302		VL00163K100	CHIP 10	1	
L303		VL00163K330	CHIP 33	1	
L304		VL00163K101	CHIP 100	1	
L305,306		VL00163K4R7	CHIP 4.7	2	
L307		VL00163K101	CHIP 100	1	
L308		VL00319K100	CHIP 10	1	
L310		VL00163K150	CHIP 15	1	
L311		VL00163J1R0	CHIP 1	1	
L4001		VL00319K221	CHIP 220	1	
L6001		VLJW2YL101JT	CHIP 100	1	
L6002		ELJFA470JF2	CHIP 47	1	
L6003		VLJW2YL220JT	CHIP 22	1	
L601		VL00163K470	CHIP 47	1	
L602		VLJW2YL150JT	CHIP 15	1	
L603		VL00163K470	CHIP 47	1	
L605		VL00163K150	CHIP 15	1	
L607,608		VL00163K150	CHIP 15	2	
			CRYSTAL OSCILLATOR		
X3001		VSXW0080	14.3Hz	1	
X6001		VSXW0086	8.000MHz	1	
X6002		VSXW0084	32KHz	1	
X601		VSXW0085	28.636Hz	1	
			PIN HEADERS		
B0002		VJPW0229	8P	1	
P0001		VJPW0002SM3	2P	1	
P0002		VJPW0242	13P	1	
P0003		VJPW0247	15P	1	
			FPC CONNECTOR		
FP0001		VJS33200014	14P	1	
FP0002		VJS2959D018	18P	1	
FP0003		VJS3319D021	21P	1	
FP0004		VJS3452C010	10P	1	
FP0005		VJPW0227	18P	1	
FP0006		VJS3452C010	10P	1	
FP0007		VJS3452C020	20P	1	
FP0008		VJS3452C012	12P	1	
FP0009		VJS3452C020	20P	1	
FP0011		VJS3319D013	13P	1	
			FUSE & PROTECTOR		
F1001 (E9)	⚠	VSFW0004	FUSE 3.15A 125V	1	
F1002 (E10)	⚠	VSFW0008	FUSE 1.6A 24V	1	
			TRANSFORMER		
T1001		ELL06T014R	FLYBACK TRANSFORMER, 0.6VA	1	
T1002		ELL04T002R		1	
T4001		E1060B008T		1	

(E11,E12,E13,E14,E15,E16,E17,E35,E42,E45,E47)

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
			MISCELLANEOUS		
E11		VSCW0837	POWER SHIELD CASE A	1	
E12		VSCW0783	HEAD AMP SHIELD CASE B	1	
E13		VSCW0900	DIGITAL SHIELD CASE A,FE	1	
E14		VSCW0902	DIGITAL SHIELD CASE B,FE	1	
E35		VMTS0035M	CUSHION	1	
E42		VMTS0064M	CUSHION	3	
E45		VGNW0510	FUSE LABEL	1	
E47		XQN2+BF3FU	SCREW,FE2X3	4	
	■		**CCD UNIT**		
			INTEGRATED CIRCUIT		
IC601		MN3716CFE	IC, CCD	1	E.S.D.
			TRANSISTOR		
Q601		2SC3931	CHIP	1	
			RESISTORS		
R601		ERJ6GEYJ332V	MGF CHIP 1/10W 3.3K	1	
R602		ERJ6GEYJ470V	MGF CHIP 1/10W 47	1	
R661		ERJ6GEYJ101V	MGF CHIP 1/10W 100	1	
			CAPACITORS		
C601		ECST1EY105	TANTALUM CHIP 25V 1	1	
C602,603		ECUV1H104ZFM	C CHIP +80%-20% 50V 0.1	2	
C664		ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
			MISCELLANEOUS		
E15		VEPW1578FA1	CCD F.P.C.	1	
E16		VSCW0668	HEAT SINK PLATE	1	
E17		XTB2+5FFN	TAPPING SCREW,FE 2X5	2	
	■		**EVF C.B.A.**		
			(A)		
			INTEGRATED CIRCUITS		
IC901		AN2515NS	IC, LINEAR EVF DRIVE	1	
			TRANSISTORS		
Q906	⚠	2SD968A-S	CHIP	1	
Q907		2SB1218A-QR	TRANSISTOR SI PNP CHIP	1	
			DIODES		
D901		SFPL-52V	CHIP	1	
			RESISTORS		
R901		ERJ6GEYJ4R7V	MGF CHIP 1/10W 4.7	1	
R905		ERJ3GEYK3R9V	MGF CHIP 3.9	1	
R911		ERJ3GEYJ514V	MGF CHIP 510K	1	
R912		ERJ3GEYJ242V	MGF CHIP 270	1	
R927		ERJ3GEYJ183V	MGF CHIP 18K	1	
R930		ERJ3GEYJ332V	MGF CHIP 3.3K	1	
R934		ERJ6GEYJ105V	MGF CHIP 1/10W 1M	1	
R936		ERJ3GEYJ222V	MGF CHIP 2.2K	1	
R943		ERJ6GEYJ185V	MGF CHIP 1/10W 1.8M	1	
R944		ERJ6GEYJ225V	MGF CHIP 1/10W 2.2M	1	
R947	●	ERJ3GEY0R00V	MGF CHIP 0	1	
R955		ERJ6ENF3302	MGF CHIP +-1% 1/10W 33K	1	
R956		ERJ3GEYJ100V	MGF CHIP 10	1	
R958		ERJ6ENF1333	MGF CHIP +-1% 1/10W 133K	1	
R961		ERJ3GEYJ471V	MGF CHIP 470	1	
R963		ERJ3GEYJ472V	MGF CHIP 4.7K	1	
R964		ERJ3GEYJ470V	MGF CHIP 47	1	
R966		ERJ3GEYJ471V	MGF CHIP 470	1	

(E18,E37,E39)

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
R967,968		ERJ6GEYJ106V	MGF CHIP 10M	2	
R969		ERJ6GEYJ395V	MGF CHIP 1/10W 3.9M	1	
R970		ERJ3GEYJ105V	MGF CHIP 1M	1	
R971		ERJ6GEYJ684V	MGF CHIP 1/10W 680K	1	
			RESISTOR VARIABLES		
VR901		EVM7JSX30BE2	VARIABLE CHIP 220	1	
VR903		EVM7TSX00BV6	CHIP 5.6M	1	
VR906		VRVW0021	CHIP 2M	1	
			CAPACITORS		
C901		VCEWS1AD107T	TANTALUM CHIP 10V 100	1	
C903		ECA0JKF101	ELECTROLYTIC 6.3V 100	1	
C904		ECQV1H104JM	POLTESTER 50V 0.1UF	1	
C908		TCUV1C155ZFM	C CHIP +80%-20% 16V 1.5	1	
C909		TCCV1C105JBM	C CHIP 16V 1	1	
C910		ECUV1H123KBV	C CHIP 50V 0.012	1	
C914		ECA1CKF470	ELECTROLYTIC 16V 47	1	
C915	⚠	MCUV2A392JUM	CHIP 100V 3900P	1	
C916		MCUV1C104KBV	C CHIP 16V 0.1	1	
C917		ECA0JKF470	ELECTROLYTIC 6.3V 47	1	
C918		ECEA1HKS4R7	ELECTROLYTIC 50V 4.7	1	
C920		MCUV1C474ZFN	C CHIP +80%-20% 16V 0.47	1	
C921		ECUV1H820JCV	C CHIP +-5% 50V 82P	1	
C923	⚠	DE405B151K1K	C CHIP 1KV 150P	1	
C924	⚠	ECKD2H331KB5	C CHIP 500V 330P	1	
C925		VCEWS1AD107T	TANTALUM CHIP 10V 100	1	
C934		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C935		ECA0JKF101	ELECTROLYTIC 6.3V 100	1	
			COILS		
L901		VLQ0163K220	CHIP 22	1	
L903	⚠	ELH5L243	LINEARITY	1	
L904		VLJW4TC220KT	22	1	
			PIN HEADERS		
P902		VJPW0006M2	6P	1	
P903		VJPW0004M2	4P	1	
			FPC CONNECTOR		
FP901		VJPW501MP06	6P	1	
			TRANSFORMER		
T901	⚠	ETF08L29A		1	
			MISCELLANEOUS		
E18		VEKW1639	CRT SOCKET UNIT	1	
E37		VEKW1755	6P CONNECTOR UNIT	2	
E39		VMTS0094	CUSHION	1	
	■		**COLOR EVF A C.B.A.**		
			(B)		
			INTEGRATED CIRCUITS		
IC901		AN2522FHPK	IC, LINEAR	1	
IC902		S2900A-7S01	IC, 0.5K EEP ROM	1	
IC903		S80739SND3T1	IC, CMOS RESET	1	
			TRANSISTORS		
Q902		2SD1819A	TRANSISTOR SI NPN CHIP	1	
Q904		XN1501	COMPLX CMP SI NPN CHIP	1	
Q905		2SB709A	CHIP	1	
Q907		2SB1218A	TRANSISTOR SI PNP CHIP	1	
			RESISTORS		
R903		ERJ3GEYJ223V	MGF CHIP 22K	1	
R904		ERJ3GEYJ103V	MGF CHIP 10K	1	
R907		ERJ3GEYJ154V	MGF CHIP 150K	1	

● MARK: 0 OHM RESISTOR

WHEN REPLACING,A 0 OHM REWSISTOR CAN BE SUBSTITUTED BY A WIRE.

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
R908		ERJ3GEYJ331V	MGF CHIP 330	1	
R909		ERJ3GEYJ103V	MGF CHIP 10K	1	
R910		RN4B2AY102J	MGF CHIP 1K	1	
R911,912		ERJ3GEYJ102V	MGF CHIP 1K	2	
R913		ERJ3GEYJ183V	MGF CHIP 18K	1	
R914		ERJ3GEYJ102V	MGF CHIP 1K	1	
R915		ERJ3GEYJ561V	MGF CHIP 560	1	
R916		ERJ3GEYJ102V	MGF CHIP 1K	1	
R917,918		ERJ3GEYJ103V	MGF CHIP 10K	2	
R922-924		ERJ3GEYJ101V	MGF CHIP 100	3	
R925		VRJSD3D2701	METAL FILM CHIP +-0.5% 2700	1	
R926		VRJSD3D4700	METAL FILM CHIP +-0.5% 470	1	
R927		VRJSD3D2201	METAL FILM CHIP +-5% 2200	1	
R928		VRJSD3D1802	METAL FILM CHIP +-0.5% 18K	1	
R929		VRJSD3D8201	METAL FILM CHIP +-0.5% 8200	1	
R930		ERJ3GEYJ103V	MGF CHIP 10K	1	
R931		ERJ3GEYJ392V	MGF CHIP 3.9K	1	
R932	●	ERJ3GEY0R00V	MGF CHIP 0	1	
R935		VRJSD3D6800	METAL FILM CHIP +-0.5% 680	1	
R940	●	ERJ3GEY0R00V	MGF CHIP 0	1	
R942		ERJ3GEYJ471V	MGF CHIP 470	1	
R943		ERJ3GEYJ101V	MGF CHIP 100	1	
R944		ERJ3GEYJ103V	MGF CHIP 10K	1	
R945		ERJ3GEYJ102V	MGF CHIP 1K	1	
R946	●	ERJ3GEY0R00V	MGF CHIP 0	1	
R947		ERJ3GEYJ103V	MGF CHIP 10K	1	
R949		ERDS2TJ104T	CARBON FILM 1/4W 100K	1	
			RESISTOR VARIABLE		
VR901		EVML1GA00B24	VARIABLE 20K	1	
			CAPACITORS		
C904		ECEV1EA4R7S	ELECTROLYTIC CHIP 25V 4.7	1	
C905		ECUV1H222KBV	C CHIP 50V 0.0022	1	
C906		ECEV1EA4R7S	ELECTROLYTIC CHIP 25V 4.7	1	
C907		ECUV1H152KBV	C CHIP 50V 0.0015	1	
C908,909		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	2	
C911		ECEV1EA4R7S	ELECTROLYTIC CHIP 25V 4.7	1	
C912		ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C913		ECST0JY106	TANTALUM CHIP 6.3V 10	1	
C915		ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C916		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	1	
C917		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C918		ECST0JX226	TANTALUM CHIP 6.3V 22	1	
C919		ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	1	
C921-923		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	3	
C924,925		ECEV1CA100S	ELECTROLYTIC CHIP 16V 10	2	
C926		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C927		ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C930		ECEV1CS100S	ELECTROLYTIC CHIP 16V 10	1	
C931		ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C932		ECEV1EA100S	ELECTROLYTIC CHIP 25V 10	1	
C933		ECUV1C104KBV	C CHIP +-10% 16V 0.1	1	
C934		ECUV1H103ZFV	C CHIP +80%-20% 50V 0.01	1	
C935		ECEV1CA470S	ELECTROLYTIC CHIP 16V 47	1	
C936		ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
			COILS		
L902		ELJPA470KF	CHIP 47	1	
L903		VLQ0163K150	CHIP 15	1	
L905		VLQ0319K100	CHIP 10	1	
			PIN HEADERS		
B902		VJP3126D006	BOARD TO BOARD 6P	1	
P901		VJPW0248	15P	1	
			FPC CONNECTOR		
FP901		VJS3452C020	20P	1	
FP902		VJPW501MP06	6P	1	

(E19,E36,E43)

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
			MISCELLANEOUS		
E36		VEKW1753	15P CONNECTOR UNIT	1	
	■		**COLOR EVF B C.B.A.**		
			(B)		
			TRANSISTOR		
Q901	⚠	2SK1299STL	F.E.T.	1	
			RESISTOR		
R902	●	ERJ3GEY0R00V	MGF CHIP 0	1	
			CAPACITOR		
C901		VCEWN0J150D6	ELECTROLYTIC CHIP 6.3V 15	1	
			COIL		
L901	⚠	ELL04T504R	CHOKE	1	
			PIN HEADER		
B901		VJS2961C006	BOARD TO BOARD 6P	1	
			TRANSFORMER		
T901	⚠	ETJ09K8AM		1	
			MISCELLANEOUS		
E19	⚠	VLLW0008	LCD LAMP	1	
E43		VSCW0829	LCD SHIELD CASE	1	
	■		**LCD C.B.A.**		
			INTEGRATED CIRCUITS		
IC1201		BA9710KV	IC, LINEAR POWER CONTROL	1	
IC4401		BA7785FS-E2	IC, LINEAR HEAD PHONE AMP	1	
IC9001		IR3Y18A	IC, LINEAR VIDEO SIGNAL PROCESS	1	
IC9002		C132EM-000	IC, CMOS STANDARD LOGIC LCD	1	
			INDICATION CONTROL		
IC9003		TDA8706A	IC, LINEAR A/D CONVERTER	1	
IC9004		TC7W32F	IC, CMOS STANDARD LOGIC	1	E.S.D.
IC9005		TC7W14F	IC, CMOS STANDARD LOGIC	1	E.S.D.
IC9006		TC74AC14FS	IC, CMOS STANDARD LOGIC	1	E.S.D.
			TRANSISTORS		
Q1201,1202		UN5112	CHIP	2	
Q1203,1204		2SD1819A	TRANSISTOR SI NPN CHIP	2	
Q1205		2SB1628-T1ZX	TRANSISTOR SI PNP CHIP	1	
Q1206,1207		2SB1424T100Q	TRANSISTOR SI PNP CHIP	2	
Q1208		2SB1218A	TRANSISTOR SI PNP CHIP	1	
Q1209		2SB1073	TRANSISTOR SI PNP CHIP	1	
Q1210		XN1501	COMPLX CMP SI NPN CHIP	1	
Q1211		2SD1819A	TRANSISTOR SI NPN CHIP	1	
Q1212		UN5213	CHIP	1	
Q1214		2SD1819A	TRANSISTOR SI NPN CHIP	1	
Q1215		UN5213	CHIP	1	
Q1216		UN5112	CHIP	1	
Q1217		2SB1218A	TRANSISTOR SI PNP CHIP	1	
Q9001,9002		XN4601	COMPLEX COMPONENT SI NPN/PNP	2	
			CHIP		
Q9003,9004	⚠	2SD1119	TRANSISTOR SI NPN CHIP	2	
Q9005		2SB1218A	TRANSISTOR SI PNP CHIP	1	
Q9006,9007		XN4601	COMPLEX COMPONENT SI NPN/PNP	2	
			CHIP		
			DIODES		
D1201		MA142WK	CHIP	1	
D1202		MA111	CHIP	1	

● MARK: 0 OHM RESISTOR

WHEN REPLACING, A 0 OHM REWSISTOR CAN BE SUBSTITUTED BY A WIRE.

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
D1203		MA143	CHIP	1	
D1204		MA736	CHIP	1	
D1205		MA142WK	CHIP	1	
D1206		MA720	CHIP	1	
D1207		MA199	CHIP	1	
D1208,1209		MA111	CHIP	2	
D9001		MA365E	CHIP	1	
D9002,9003		MA143	CHIP	2	
D9004		MA111	CHIP	1	
D9005		1SS357	CHIP	1	
D9006		MA111	CHIP	1	
D9007		1SS357	CHIP	1	
D9008		MA111	CHIP	1	
D9009,9010		MA143	CHIP	2	
D9011		MA142WK	CHIP	1	
D9012,9013		MA111	CHIP	2	
D9017,9018		MA111	CHIP	2	
D9021		MA8082-L	ZENER 8.2V	1	
			RESISTORS		
R1201		ERJ3GEYJ272V	MGF CHIP 2.7K	1	
R1202		ERJ3GEYJ223V	MGF CHIP 22K	1	
R1203,1204		ERJ3GEYJ103V	MGF CHIP 10K	2	
R1205		ERJ3GEYJ222V	MGF CHIP 2.2K	1	
R1206		ERJ3GEYJ103V	MGF CHIP 10K	1	
R1207		ERJ3GEYJ824V	MGF CHIP 820K	1	
R1208		ERJ3GEYJ223V	MGF CHIP 22K	1	
R1209		ERJ3GEYJ103V	MGF CHIP 10K	1	
R1210		ERJ3GEYJ223V	MGF CHIP 22K	1	
R1211		ERJ3GEYJ333V	MGF CHIP 33K	1	
R1212		ERJ3GEYJ104V	MGF CHIP 100K	1	
R1213,1214		ERJ3GEYJ222V	MGF CHIP 2.2K	2	
R1215,1216		VRJSD3D1801	METAL FILM CHIP +-0.5% 1800	2	
R1217		VRJSD3D5101	METAL FILM CHIP +-0.5% 5100	1	
R1218		ERJ3GEYJ223V	MGF CHIP 22K	1	
R1219		ERJ3GEYJ333V	MGF CHIP 33K	1	
R1220		VRJSD3D2701	METAL FILM CHIP +-0.5% 2700	1	
R1221		ERJ3GEYJ222V	MGF CHIP 2.2K	1	
R1222,1223	●	ERJ3GEY0R00V	MGF CHIP 0	1	
R1224		ERJ3GEYJ220V	MGF CHIP 22	1	
R1225,1226		ERJ3GEYJ270V	MGF CHIP 27	2	
R1227		ERJ3GEYJ221V	MGF CHIP 220	1	
R1228		ERJ8GEYJ3R3V	MGF CHIP 1/8W 3.3	1	
R1229		ERJ3GEYJ562V	MGF CHIP 5.6K	1	
R1230		ERJ3GEYJ563V	MGF CHIP 56K	1	
R1232		VRJSD3D1501V	METAL FILM CHIP +-0.5% 1500	1	
R1233		ERJ3GEYJ152V	MGF CHIP 1.5K	1	
R1234		VRJSD3D4701	METAL FILM CHIP +-0.5% 4700	1	
R1235	●	ERJ3GEY0R00V	MGF CHIP 0	1	
R1236		VRJSD3D8201	METAL FILM CHIP +-0.5% 8200	1	
R1237		VRJSD3D2701	METAL FILM CHIP +-0.5% 2700	1	
R1238		VRJSD3D1800	METAL FILM CHIP +-0.5% 180	1	
R1239		VRJSD3D9101	METAL FILM CHIP +-0.5% 9100	1	
R1240		VRJSD3D2701	METAL FILM CHIP +-0.5% 2700	1	
R1241		VRJSD3D1000	METAL FILM CHIP +-0.5% 100	1	
R1242		ERJ3GEYJ272V	MGF CHIP 2.7K	1	
R1243		VRJSD3D6802	METAL FILM CHIP +-0.5% 68K	1	
R1244		VRJSD3D2701	METAL FILM CHIP +-0.5% 2700	1	
R1245		ERJ6GEYJ100V	MGF CHIP 1/10W 10	1	
R1246,1247		ERJ3GEYJ272V	MGF CHIP 2.7K	2	
R1248,1249		ERJ3GEYJ562V	MGF CHIP 5.6K	2	
R1250-1252		ERJ3GEYJ473V	MGF CHIP 47K	3	
R1253		ERJ3GEYJ103V	MGF CHIP 10K	1	
R1254,1255		VRJSD3D1502	METAL FILM CHIP +-0.5% 15K	2	
R1256		ERJ3GEYJ223V	MGF CHIP 22K	1	
R1257		ERJ3GEYJ102V	MGF CHIP 1K	1	
R1258,1259		ERJ3GEYJ473V	MGF CHIP 47K	2	
R1260		ERJ3GEYJ102V	MGF CHIP 1K	1	
R1261		ERJ3GEYJ473V	MGF CHIP 47K	1	
R1266	●	ERJ6GEY0R00V	MGF CHIP 1/10W 0	1	
R4401		ERJ3GEYJ332V	MGF CHIP 3.3K	1	
R4402		ERJ3GEYJ182V	MGF CHIP 1.8K	1	
R4403	●	ERJ3GEY0R00V	MGF CHIP 0	1	
R4406		ERJ3GEYJ223V	MGF CHIP 22K	1	
R4407		ERJ3GEYJ153V	MGF CHIP 15K	1	
R4410		ERJ3GEYJ101V	MGF CHIP 100	1	
R4411		ERJ3GEYJ273V	MGF CHIP 27K	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
R4413		ERJ3GEYJ332V	MGF CHIP 3.3K	1	
R4414		ERJ3GEYJ103V	MGF CHIP 10K	1	
R4421		ERJ3GEYJ682V	MGF CHIP 6.8K	1	
R9007		ERJ3GEYJ272V	MGF CHIP 2.7K	1	
R9008		ERJ3GEYJ222V	MGF CHIP 2.2K	1	
R9009		ERJ3GEYJ333V	MGF CHIP 33K	1	
R9010		ERJ3GEYJ563V	MGF CHIP 56K	1	
R9013-9016		ERJ3GEYJ472V	MGF CHIP 4.7K	4	
R9017		ERJ3GEYJ223V	MGF CHIP 22K	1	
R9018		ERJ3GEYJ273V	MGF CHIP 27K	1	
R9019		ERJ3GEYJ153V	MGF CHIP 15K	1	
R9020		ERJ3GEYJ223V	MGF CHIP 22K	1	
R9021		ERJ3GEYJ105V	MGF CHIP 1M	1	
R9024		ERJ3GEYJ223V	MGF CHIP 22K	1	
R9025		ERJ3GEYJ273V	MGF CHIP 27K	1	
R9026	●	ERJ3GEY0R00V	MGF CHIP 0	1	
R9027		ERJ3GEYJ183V	MGF CHIP 18K	1	
R9028		ERJ3GEYJ334V	MGF CHIP 330K	1	
R9030		ERJ3GEYJ105V	MGF CHIP 1M	1	
R9031		ERJ3GEYJ271V	MGF CHIP 270	1	
R9032		ERJ3GEYJ562V	MGF CHIP 5.6K	1	
R9033		ERJ3GEYJ822V	MGF CHIP 8.2K	1	
R9034		ERJ3GEYJ203V	MGF CHIP 20K	1	
R9035	●	ERJ3GEY0R00V	MGF CHIP 0	1	
R9036		ERJ3GEYJ333V	MGF CHIP 33K	1	
R9037,9038		ERJ3GEYJ393V	MGF CHIP 39K	2	
R9040,9041		ERJ3GEYJ102V	MGF CHIP 1K	2	
R9044		ERJ3GEYJ102V	MGF CHIP 1K	1	
R9047		ERJ3GEYJ102V	MGF CHIP 1K	1	
R9050		ERJ3GEYJ4R7V	MGF CHIP 4.7	1	
R9051-9056	●	ERJ3GEY0R00V	MGF CHIP 0	1	
R9057,9058		ERJ3GEYJ333V	MGF CHIP 33K	2	
R9060		ERJ3GEYJ102V	MGF CHIP 1K	1	
R9061		ERJ3GEYJ333V	MGF CHIP 33K	1	
R9062		ERJ3GEYJ104V	MGF CHIP 100K	1	
R9063	●	ERJ3GEY0R00V	MGF CHIP 0	1	
R9066	●	ERJ3GEY0R00V	MGF CHIP 0	1	
R9068,9069	●	ERJ3GEY0R00V	MGF CHIP 0	1	
R9070		ERJ3GEYJ331V	MGF CHIP 330	1	
R9071		ERJ3GEYJ472V	MGF CHIP 4.7K	1	
R9072		ERJ3GEYJ473V	MGF CHIP 47K	1	
R9073		ERJ3GEYJ223V	MGF CHIP 22K	1	
R9074-9077	●	ERJ3GEY0R00V	MGF CHIP 0	1	
R9078		ERJ3GEYJ222V	MGF CHIP 2.2K	1	
R9079	●	ERJ3GEY0R00V	MGF CHIP 0	1	
R9081		ERJ3GEYJ103V	MGF CHIP 10K	1	
R9082		ERJ3GEYJ102V	MGF CHIP 1K	1	
R9083		ERJ3GEYJ393V	MGF CHIP 39K	1	
R9084		ERJ3GEYJ222V	MGF CHIP 2.2K	1	
R9085		ERJ3GEYJ332V	MGF CHIP 3.3K	1	
R9086	●	ERJ3GEY0R00V	MGF CHIP 0	1	
R9087		ERJ3GEYJ333V	MGF CHIP 33K	1	
R9088	●	ERJ3GEY0R00V	MGF CHIP 0	1	
R9089		ERJ3GEYJ391V	MGF CHIP 390	1	
R9090-9092		ERJ3GEYJ101V	MGF CHIP 100	3	
R9093-9096		ERJ3GEYJ472V	MGF CHIP 4.7K	4	
R9097		ERJ3GEYJ221V	MGF CHIP 220	1	
R9098		ERJ3GEYJ103V	MGF CHIP 10K	1	
R9099		ERJ3GEYJ472V	MGF CHIP 4.7K	1	
R9100		ERJ3GEYJ221V	MGF CHIP 220	1	
R9101		ERJ3GEYJ103V	MGF CHIP 10K	1	
R9102		ERJ3GEYJ105V	MGF CHIP 1M	1	
R9103	●	ERJ3GEY0R00V	MGF CHIP 0	1	
R9104		ERJ3GEYJ472V	MGF CHIP 4.7K	1	
R9105		ERJ3GEYJ103V	MGF CHIP 10K	1	
R9106,9107		ERJ3GEYJ221V	MGF CHIP 220	2	
R9108		ERJ3GEYJ103V	MGF CHIP 10K	1	
R9109		ERJ3GEYJ472V	MGF CHIP 4.7K	1	
R9110,9111	●	ERJ3GEY0R00V	MGF CHIP 0	1	
R9112		ERJ3GEYJ3R3V	MGF CHIP 3.3	1	
R9113		ERJ3GEYJ472V	MGF CHIP 4.7K	1	
R9114		ERJ3GEYJ272V	MGF CHIP 2.7K	1	
R9115		ERJ3GEYJ472V	MGF CHIP 4.7K	1	
R9116,9117		ERJ3GEYJ221V	MGF CHIP 220	2	
R9122		ERJ3GEYJ473V	MGF CHIP 47K	1	
R9123		ERJ3GEYJ474V	MGF CHIP 470K	1	
R9124-9127		ERJ3GEYJ272V	MGF CHIP 2.7K	4	
R9128		ERJ3GEYJ473V	MGF CHIP 47K	1	

● MARK: 0 OHM RESISTOR

WHEN REPLACING, A 0 OHM REWSISTOR CAN BE SUBSTITUTED BY A WIRE.

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
R9129		ERJ3GEYJ222V	MGF CHIP 2.2K	1	
R9134-9138		ERJ3GEYJ101V	MGF CHIP 100	5	
R9139	●	ERJ3GEY0R00V	MGF CHIP 0	1	
R9140		ERJ6GEYJ3R3V	MGF CHIP 1/10W 3.3	1	
R9141-9147	●	ERJ3GEY0R00V	MGF CHIP 0	1	
R9149, 9150		ERJ3GEYJ102V	MGF CHIP 1K	2	
R9151	●	ERJ3GEY0R00V	MGF CHIP 0	1	
R9152		ERJ3GEYJ682V	MGF CHIP 6.8K	1	
R9156		ERJ3GEYJ682V	MGF CHIP 6.8K	1	
R9165		ERJ3GEYJ102V	MGF CHIP 1K	1	
R9168		ERJ3GEYJ272V	MGF CHIP 2.7K	1	
R9169, 9170		ERJ3GEYJ222V	MGF CHIP 2.2K	2	
R9171		ERJ3GEYJ272V	MGF CHIP 2.7K	1	
R9173		ERJ3GEYJ123V	MGF CHIP 12K	1	
R9174		ERJ3GEYJ333V	MGF CHIP 33K	1	
R9175	●	ERJ3GEY0R00V	MGF CHIP 0	1	
R9177	●	ERJ3GEY0R00V	MGF CHIP 0	1	
R9178		ERJ3GEYJ472V	MGF CHIP 4.7K	1	
R9179, 9180	●	ERJ3GEY0R00V	MGF CHIP 0	1	
			RESISTOR VARIABLES		
VR4401		EVLHFKA01B14	VARIABLE 10K	1	
VR9001-9004		EVM7JSX30B14	VARIABLE CHIP 10K	4	
VR9005		EVML1GA00B24	VARIABLE 20K	1	
VR9006		EVML1GA00B14	VARIABLE 10K	1	
VR9007, 9008		EVM7JSX30B53	VARIABLE CHIP 5K	2	
VR9010		EVM7JSX30B14	VARIABLE CHIP 10K	1	
VR9011		EVLHFKA01B53	5K	1	
VR9012		EVM7JSX30B14	VARIABLE CHIP 10K	1	
			CAPACITORS		
C1201		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C1202		ECST0JY106	TANTALUM CHIP 6.3V 10	1	
C1203		VCUS0BA105KB	C CHIP 10V 1	1	
C1204		MCUV1E104KBN	C CHIP 25V 0.1	1	
C1205		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C1206		VCUS0BC334KB	C CHIP 16V 0.33	1	
C1207		ECST0JY475	TANTALUM CHIP 6.3V 4.7	1	
C1208		ECUV1H331JCV	C CHIP 50V 330P	1	
C1209		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C1210		VCUS0AC105KB	C CHIP 16V 1	1	
C1211		ECEV1CA470S	ELECTROLYTIC CHIP 16V 47	1	
C1212		MCUV1C685ZFP	C CHIP +80%-20% 16V 6.8	1	
C1213, 1214		ECUV1H472KBV	C CHIP 50V 0.0047	2	
C1215-1217		ECUV1H102KBV	C CHIP 50V 0.001	3	
C1219		ECUV1H103KBV	C CHIP 50V 0.01	1	
C1220		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C1221		MCUV1E104KBN	C CHIP 25V 0.1	1	
C1222		VCUS0AA335KB	C CHIP 10V 3.3	1	
C1223		ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	1	
C1224		ECUV1H471KBV	C CHIP 50V 470P	1	
C1225		VCUS0AC225KB	C CHIP 16V 2.2	1	
C1226		ECEV0JA470S	ELECTROLYTIC CHIP 6.3V 47	1	
C1227		ECUV1H681KBV	C CHIP 50V 680P	1	
C1228		VCUS0BA105KB	C CHIP 10V 1	1	
C1229		ECST1AX106	TANTALUM CHIP 10V 10	1	
C1230		ECEV1HA3R3S	ELECTROLYTIC CHIP 50V 3.3	1	
C1231		VCUS0AH224KB	C CHIP 50V 0.22	1	
C1232		VCUS0AV105ZF	C CHIP +80%-20% 35V 1	1	
C1234		ECUV1H103KBV	C CHIP 50V 0.01	1	
C1235, 1236		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	2	
C1237, 1238		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	2	
C4401		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C4402		VCESG0J470D6	ELECTROLY CHIP 6.3V 47	1	
C4403		VCESG0G151D3	ELECTROLY CHIP 4V 150	1	
C4404		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C4406, 4407		ECUV1H182KBV	C CHIP 50V 0.0018	2	
C4408, 4409		VCESG0J470D6	ELECTROLY CHIP 6.3V 47	2	
C4410, 4411		MCUV1C473KRV	C CHIP 16V 0.047	2	
C4413-4415		VCUS0BC474KB	C CHIP 16V 0.47	3	
C4416		VCESG0J100B6	ELECTROLY CHIP 6.3V 10	1	
C4417, 4418		VCUS0BC474KB	C CHIP 16V 0.47	2	
C4420		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C4421		ECUV1H472KBV	C CHIP 50V 0.0047	1	
C4423		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	1	
C4424		VCESG0J470D6	ELECTROLY CHIP 6.3V 47	1	

Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
C9001-9004		ECUV1H103KBV	C CHIP 50V 0.01	4	
C9006-9010		ECUV1H103KBV	C CHIP 50V 0.01	5	
C9011		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C9012		ECST1AY106	TANTALUM CHIP 10V 10	1	
C9013		ECEV1AA330S	ELECTROLYTIC CHIP 10V 33	1	
C9014		ECUV1H103KBV	C CHIP 50V 0.01	1	
C9015		ECUV1H470JCV	C CHIP +-5% 50V 47P	1	
C9016		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	1	
C9017		ECUV1H222KBV	C CHIP 50V 0.0022	1	
C9019		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	1	
C9020		ECUV1H473ZFV	C CHIP +80%-20% 50V 0.047	1	
C9023, 9024		ECUV1H103KBV	C CHIP 50V 0.01	2	
C9025		VCUS0BC474ZF	C CHIP +80%-20% 16V 0.47	1	
C9026		ECUV1H103KBV	C CHIP 50V 0.01	1	
C9027		ECUV1C104KBV	C CHIP +-10% 16V 0.1	1	
C9030		ECUV1H470JCV	C CHIP +-5% 50V 47P	1	
C9031		MCUV1C475ZFM	C CHIP +80%-20% 16V 4.7	1	
C9032		ECUV1H470JCV	C CHIP +-5% 50V 47P	1	
C9033		MCUV1C475ZFM	C CHIP +80%-20% 16V 4.7	1	
C9034		ECUV1H470JCV	C CHIP +-5% 50V 47P	1	
C9035, 9036		MCUV1C475ZFM	C CHIP +80%-20% 16V 4.7	2	
C9037		ECUV1C104KBV	C CHIP +-10% 16V 0.1	1	
C9038, 9039		MCUV1E104KBN	C CHIP 25V 0.1	2	
C9040-9042		ECUV1C104KBV	C CHIP +-10% 16V 0.1	3	
C9043		ECUV1H151JCV	C CHIP +-5% 50V 150P	1	
C9044		ECUV1H471KBV	C CHIP 50V 470P	1	
C9045		ECUV1H391JCV	C CHIP +-5% 50V 390P	1	
C9046		ECST1AX226	TANTALUM CHIP 10V 22	1	
C9047		ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C9048		VCUS0BC334KB	C CHIP 16V 0.33	1	
C9049		ECUV1H472KBV	C CHIP 50V 0.0047	1	
C9050		ECUV1H181JCV	C CHIP +-5% 50V 180P	1	
C9051		ECUV1H102KBV	C CHIP 50V 0.001	1	
C9052		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C9053		ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C9054		VCUS0AV335ZF	C CHIP +80%-20% 35V 3.3	1	
C9055		ECUV1H101JCV	C CHIP +-5% 50V 100P	1	
C9056		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C9057		ECUV1H330JCV	C CHIP +-5% 50V 33P	1	
C9065		ECUV1C104ZFV	C CHIP +80%-20% 16V 0.1	1	
C9067		ECA1CKF470	ELECTROLYTIC 16V 47	1	
C9068		MCUV1H273KBM	C CHIP 50V 0.027	1	
C9069		VCCW0006	C CHIP	1	
C9070		ECUV1H101JCV	C CHIP +-5% 50V 100P	1	
C9071		ECUV1H103KBV	C CHIP 50V 0.01	1	
C9073		ECUV1H101JCV	C CHIP +-5% 50V 100P	1	
C9074		MCUV1H335ZFS	C CHIP +80%-20% 50V 3.3	1	
C9075		VCUS0FC106ZF	C CHIP +80%-20% 16V 10	1	
C9076		ECUV1H103KBV	C CHIP 50V 0.01	1	
C9077		ECUV1H101JCV	C CHIP +-5% 50V 100P	1	
C9078		ECUV1H103KBV	C CHIP 50V 0.01	1	
C9079		ECUV1H101JCV	C CHIP +-5% 50V 100P	1	
C9080		ECUV1H560JCV	C CHIP +-5% 50V 56P	1	
C9081, 9082		ECUV1H221JCV	C CHIP +-5% 50V 220P	2	
C9084		ECUV1C474ZFN	C CHIP +80%-20% 16V 0.47	1	
C9085		ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	1	
C9089		ECUV1H560JCV	C CHIP +-5% 50V 56P	1	
C9090		ECUV1H391JCV	C CHIP +-5% 50V 390P	1	
C9091		ECUV1H221JCV	C CHIP +-5% 50V 220P	1	
C9096		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	1	
C9099		ECUV1C105ZFN	C CHIP +80%-20% 16V 1	1	
C9103		ECUV1C104KBV	C CHIP +-10% 16V 0.1	1	
C9104		MCUV1C105ZFM	C CHIP +80%-20% 16V 1	1	
C9105, 9106		ECUV1H103KBV	C CHIP 50V 0.01	2	
C9107		ECUV1C104KBV	C CHIP +-10% 16V 0.1	1	
			COILS		
L1201		ELC5TB100M	CHOKE	1	
L1202		SLF7032T100M	CHOKE	1	
L1203		N06DA100K	SWITCHING COIL	1	
L1204		VL00319K100	CHIP 10	1	
L1205		ELL7TRD011	CHOKE	1	
L1206		VL00163K101	CHIP 100	1	
L1207		VLJN2YL101JT	CHIP 100	1	
L4401, 4402		VL00319K101	CHIP 100	2	
L9001		VL00163K470	CHIP 47	1	
L9002		VL00163K390	CHIP 39	1	

● MARK: 0 OHM RESISTOR

WHEN REPLACING, A 0 OHM REMSISTOR CAN BE SUBSTITUTED BY A WIRE.

(E6, E22, E27, E33, E40, E41, E54, E61, E65)

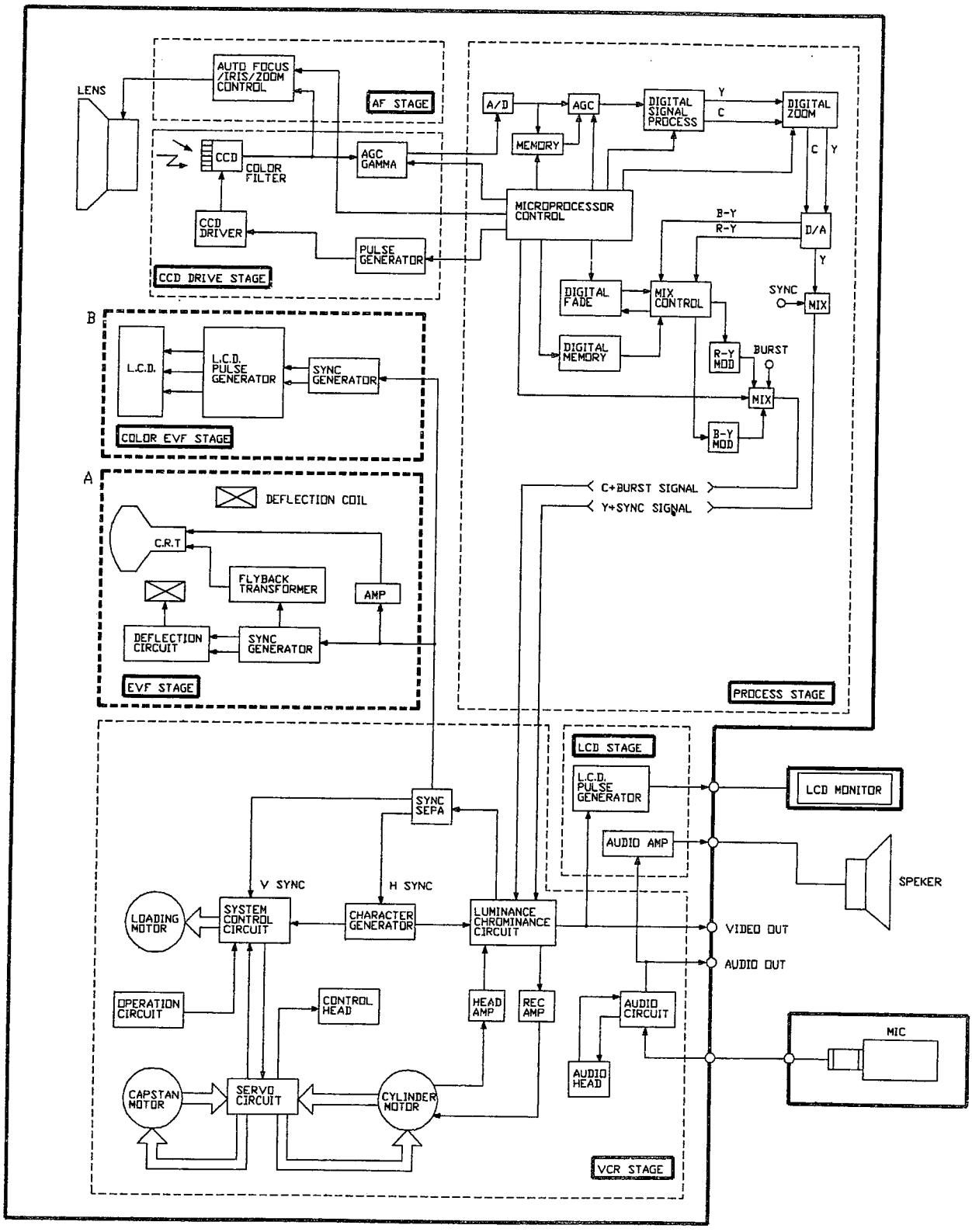
Ref. No.		Part No.	Part Name & Description	Pcs / Set	Remarks
L9003		VLO0319K470	CHIP 47	1	
L9004		VLJW2YL3R9JT	CHIP 3.9	1	
L9005	⚠	VLOW0032	CHOKE	1	
			CRYSTAL OSCILLATOR		
X9001		VSXW0089	3.58MHz	1	
			PIN HEADERS		
P9001		VJPW0251	14P	1	
P9002		VJPW0235	2P	1	
			FPC CONNECTOR		
FP9001		VJPW521MP12	12P	1	
FP9002		VJPW521MP17	17P	1	
			SWITCHES		
SW1201		VSSW0064	POWER	1	
SW1203		VSSW0101	NORMAL/REVERSE	1	
			TRANSFORMER		
T1201		ELL7TRD005		1	
T9001	⚠	ETJ11K27AM		1	
			MISCELLANEOUS		
JK4401 (E54)		VJJW0066	JACK F.P.C.	1	
E42		VMTS0064M	CUSHION	1	
E57		VSCW0889	LCD SHIELD CASE A, FE	1	
E59		VSCW0890	BACK LIGHT SHIELD CASE, FE	1	
E58		VSCW0892	LCD SHIELD CASE B, FE	1	
	■		**RELAY C.B.A.**		
			PIN HEADERS		
P0001		VJPW0243	13P	1	
P0002		VJPW0251	14P	1	
P0003		VJPW0250	2P	1	
			ELECTRICAL PARTS		
			LOCATED ON CHASSIS		
E6		VEOW0226	MECHANISM CHASSIS C.B.A.	1	
E22		VJBW1584F	CYLINDER CONNECTOR 10P	1	
E27	⚠	ELY05V583A	DY ASS'Y	1	
		(A)			
E33	⚠	M01LGM07WB01	CRT	1	
		(A)			
E40		VJBW1512F	LENS CONNECTOR	1	
E41	⚠	VLLW0007	LAMP	1	
E61		VEKW1760	SPEAKER UNIT	1	
E65		VEKW1758	14P CONNECTOR UNIT	1	

Item No.	Drawing No.	Description	Pcs/ Set	Part No.	Remarks
		SERVICE FIXTURES & TOOLS			
		LIGHT BOX W/CHARTS SET	1	VFKS002	
		GRAY SCALE CHART	1	VFKS002A	
		COLOR BAR CHART	1	VFKS002B	
		REGISTRATION CHART	1	VFKS002C	
		RESOLUTION CHART	1	VFKS002D	
		LIGHT BOX	1	VFKS002Y	
		REFLECTION CHART SET	1	VFKS003-N	
		GRAY SCALE CHART	1	VFKS003A	
		COLOR BAR CHART	1	VFKS003B	
		REGISTRATION CHART	1	VFKS003C	
		RESOLUTION CHART	1	VFKS003D	
		LOCK SCREWDRIVER	1	VFKS0069	
		GREASE	1	VFKS0081	
		A.W.B. ADJUSTMENT FIXTURE	1	VFKW0066	
		DIGITAL ADJUSTMENT CONTROL TOOL	1	VFKW0083	
		EXTENSION CABLE 18P	1	VFKW0084A	
		EXTENSION CABLE 12P	1	VUVS0007	
		EXTENSION CABLE 21P	1	VUVS0008	
		COLOR CHIP CHART	1	VFKW0116	
		EXTENSION CABLE 18P	1	VFKW0117B	
		TP BOARD KIT	1	VFKW0123	
		TP ADJUSTMENT CABLE 40P	1	VFKW0123A	
		TP ADJUSTMENT PCB 40P	1	VFKW0123B	
		TP CLIP 40P	1	VFKW0123C	
		EXTENSION CABLE 14P	1	VFKW0124A	
		CAAS KIT	1	VFKW1000	
		INTERFACE BOX	1	VFKW1000A	
		CAMERA CONNECTING CABLE	1	VFKW1000B	
		9PIN RS-232C CABLE	1	VFKW1000C	
		25PIN RS-232C CABLE	1	VFKW1000D	
		HEX. WRENCH SET	1	VFK0326	
		MOLYTONE GREASE	1	VFK1024	
		HEAD CLEANING STICK	1	VFK27	
		VHS-C ALIGNMENT TAPE	1	VFMS0004H6C	
		VHS-C ALIGNMENT TAPE	1	VFMW0001C	
		VHS-C ALIGNMENT TAPE	1	VFMW0002C	
		BATTERY CATCHER UNIT	1	VJHW0053W	
		AUDIO VIDEO CABLE	1	VJAW0026	
		SIDE L CONNECTOR UNIT	1	VEQW0261	

VII. BLOCK DIAGRAM
OVERALL BLOCK DIAGRAM

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-L657 PV-L757	A B

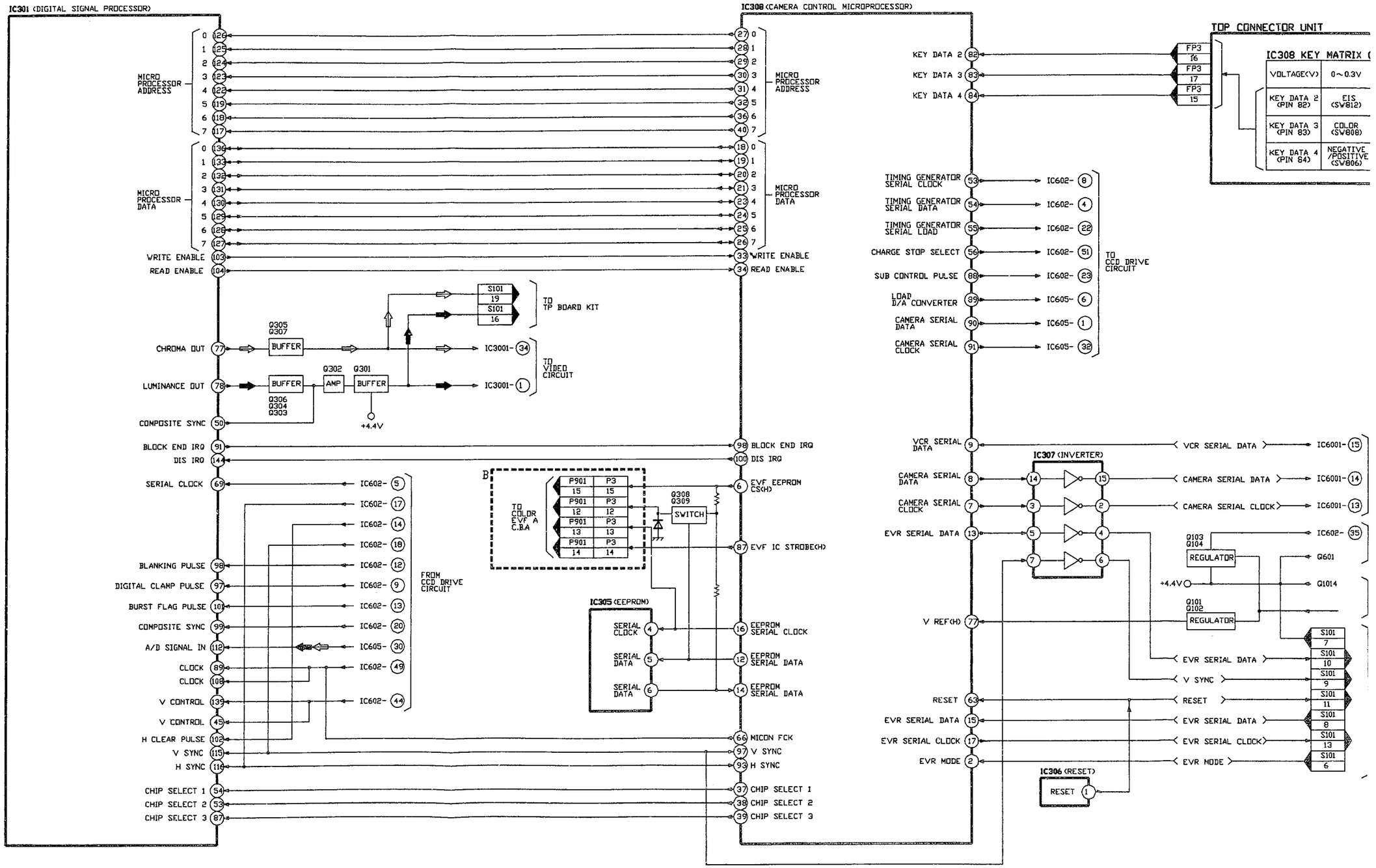


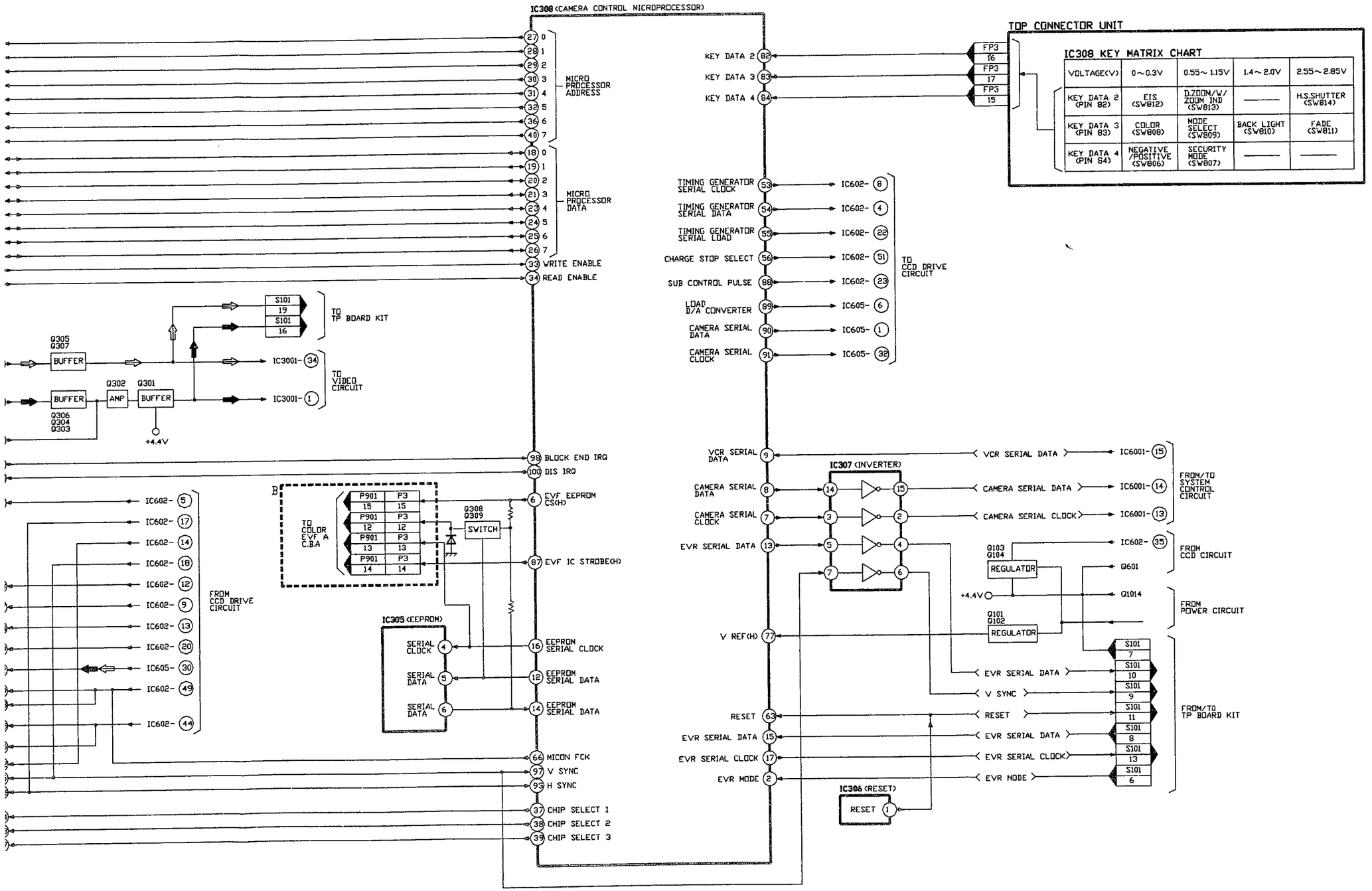
PROCESS BLOCK DIAGRAM

COMPARISON CHART OF MODELS & MARKS

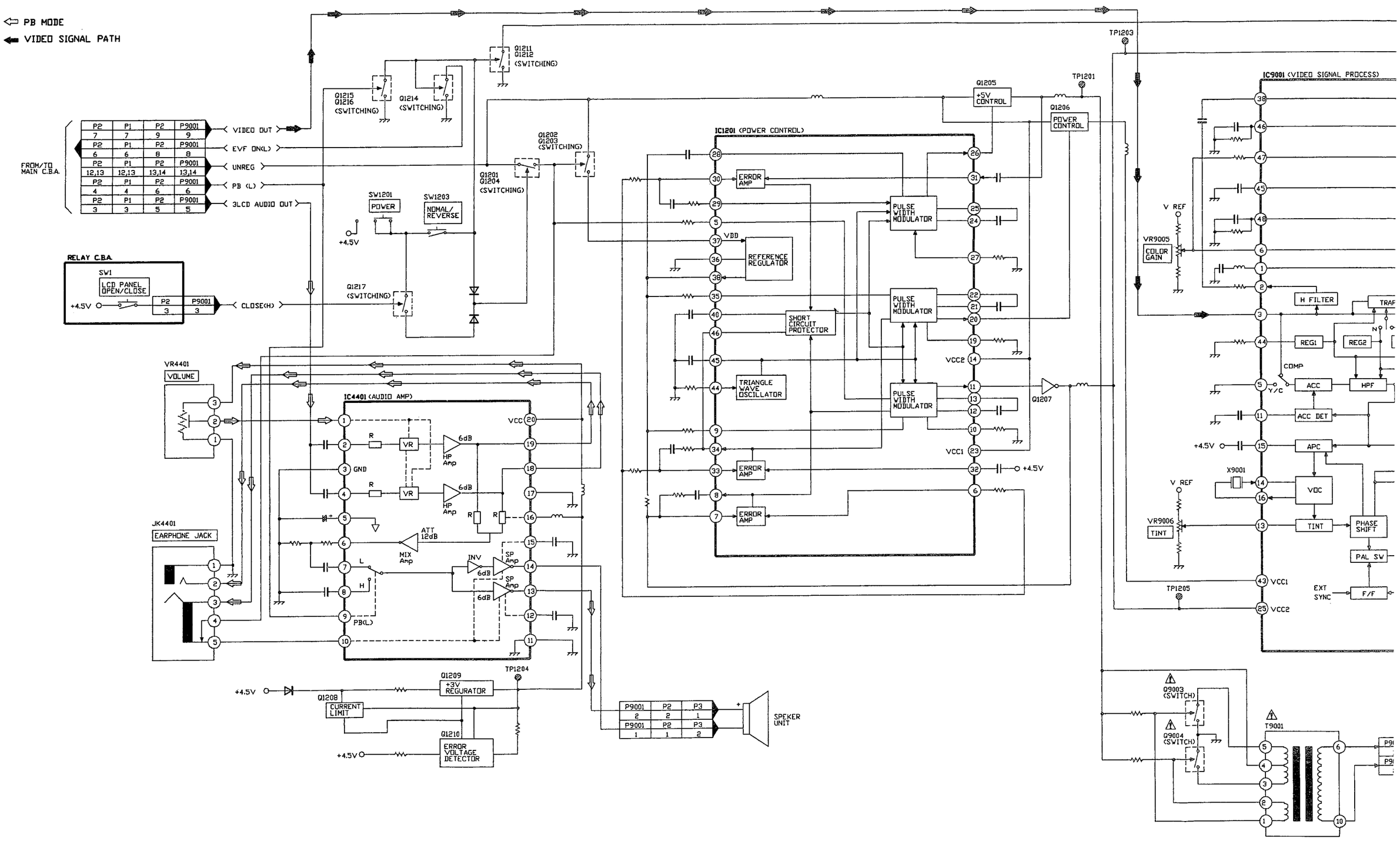
MODEL	MARK
PV-L657	A
PV-L757	B

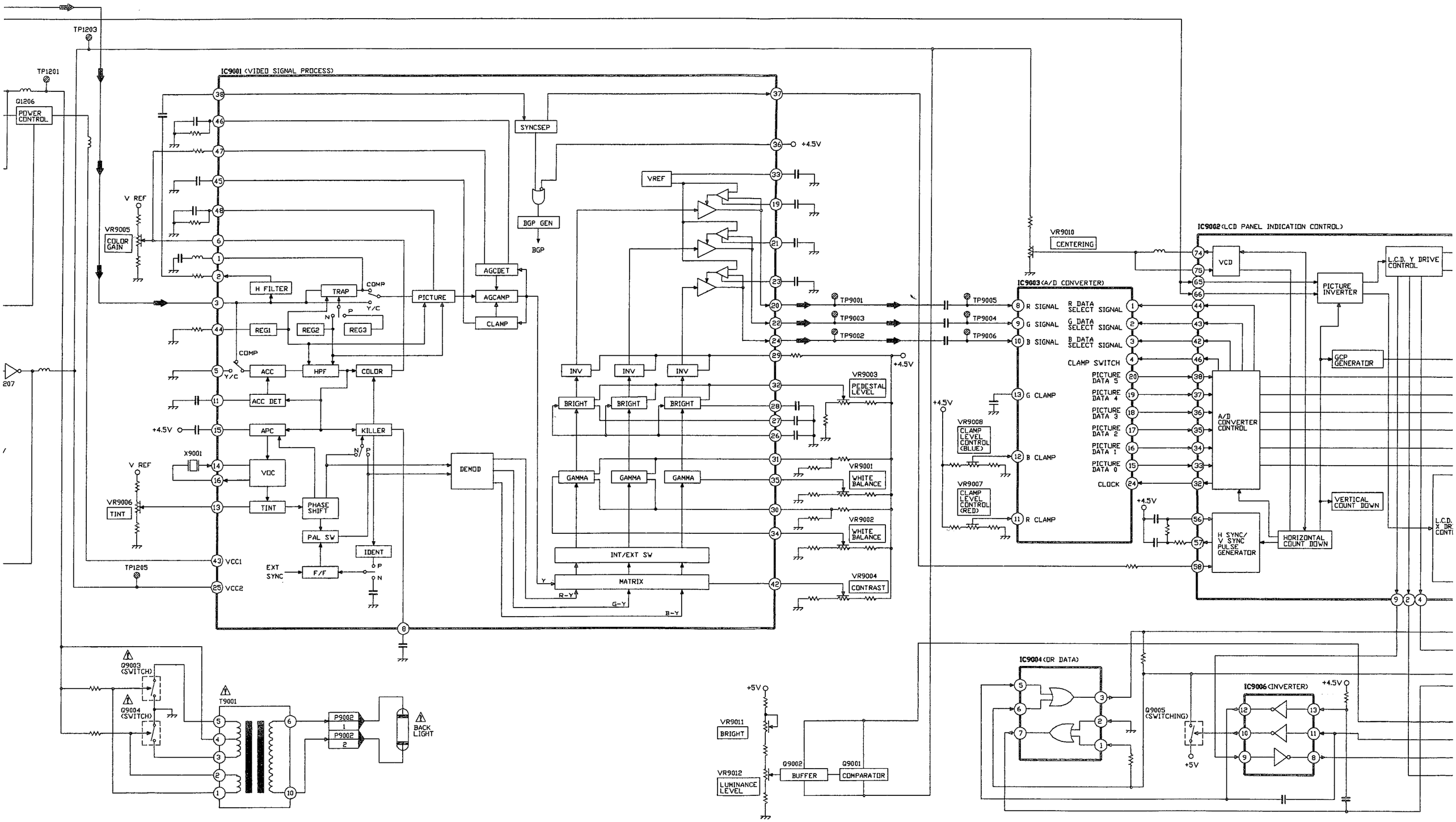
⇦ PREVIDEO(CHROMA)SIGNAL PATH ⇦ PREVIDEO(LUMINANCE)SIGNAL PATH




IC308 (CAMERA CONTROL MICROPROCESSOR)
MICRO PROCESSOR ADDRESS
MICRO PROCESSOR DATA
WRITE ENABLE
READ ENABLE
KEY DATA 2
KEY DATA 3
KEY DATA 4
TOP CONNECTOR UNIT
IC308 KEY MATRIX CHART
VOLTAGE(V) | 0~0.3V | 0.55~1.15V | 1.4~2.0V | 2.55~2.85V
KEY DATA 2 (PIN 82) | EIS (SW812) | D.ZOOM/W/ ZOOM IND (SW813) | ——— | H.S.SHUTTER (SW814)
KEY DATA 3 (PIN 83) | COLOR (SW808) | MODE SELECT (SW809) | BACK LIGHT (SW810) | FADE (SW811)
KEY DATA 4 (PIN 84) | NEGATIVE /POSITIVE (SW806) | SECURITY MODE (SW807) | ——— | ———
TIMING GENERATOR SERIAL CLOCK
TIMING GENERATOR SERIAL DATA
TIMING GENERATOR SERIAL LOAD
CHARGE STOP SELECT
SUB CONTROL PULSE
LOAD D/A CONVERTER
CAMERA SERIAL DATA
CAMERA SERIAL CLOCK
TO CCD DRIVE CIRCUIT
TO TP BOARD KIT
TO VIDEO CIRCUIT
BUFFER
AMP
+4.4V
BLOCK END IRQ
DIS IRQ
EVF EEPROM CS(H)
EVF IC STROBE(H)
TO COLOR EVF A C.B.A
SWITCH
IC305 (EEPROM)
SERIAL CLOCK
SERIAL DATA
EEPROM SERIAL CLOCK
EEPROM SERIAL DATA
FROM CCD DRIVE CIRCUIT
MICON FCK
V SYNC
H SYNC
CHIP SELECT 1
CHIP SELECT 2
CHIP SELECT 3
VCR SERIAL DATA
CAMERA SERIAL DATA
CAMERA SERIAL CLOCK
EVR SERIAL DATA
V REF(H)
RESET
EVR SERIAL CLOCK
EVR MODE
IC307 (INVERTER)
IC306 (RESET)
REGULATOR
FROM/TO SYSTEM CONTROL CIRCUIT
FROM CCD CIRCUIT
FROM POWER CIRCUIT
FROM/TO TP BOARD KIT

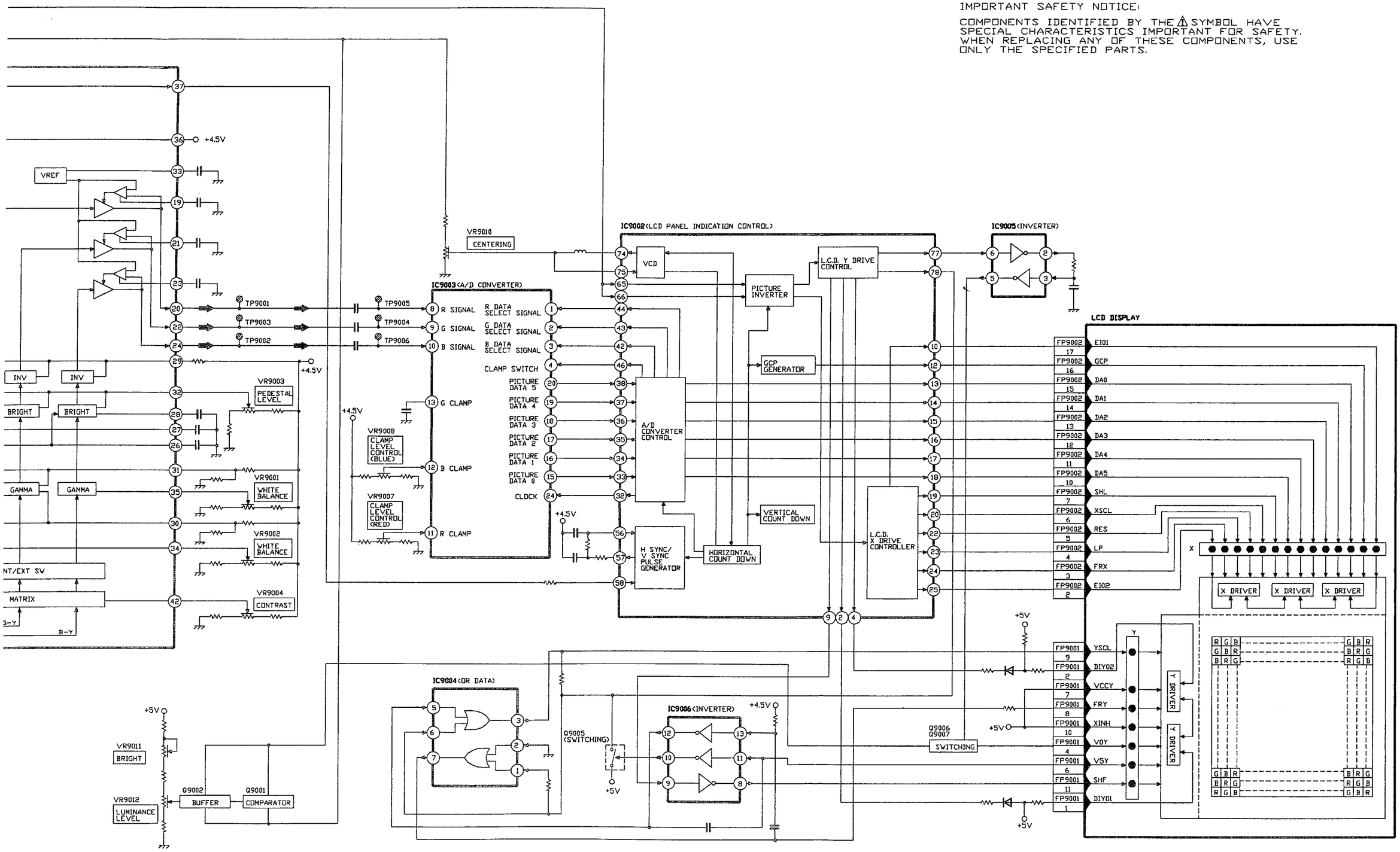
LCD BLOCK DIAGRAM



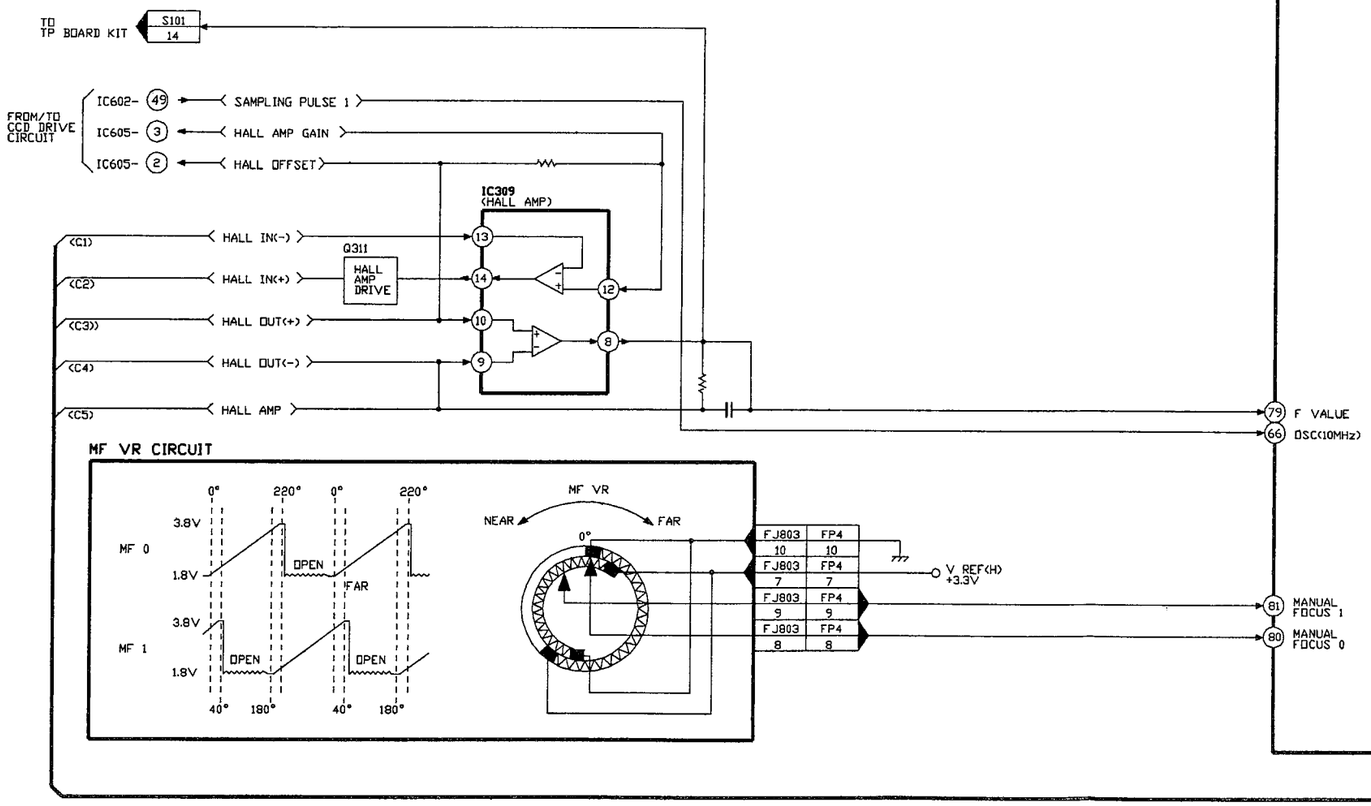

TP1203
TP1201
Q1206
POWER CONTROL
IC9001 (VIDEO SIGNAL PROCESS)
V REF
VR9005
COLOR GAIN
H FILTER
TRAP
COMP
Y/C
N
P
PICTURE
AGCDET
AGCAMP
CLAMP
REG1
REG2
REG3
ACC
HPF
COLOR
ACC DET
APC
KILLER
X9001
VCO
TINT
PHASE SHIFT
PAL SW
IDENT
F/F
EXT SYNC
DEMOD
SYNCSEP
BGP GEN
BGP
VCC1
VCC2
TP1205
+4.5V
VREF
INV
BRIGHT
GAMMA
INT/EXT SW
MATRIX
R-Y
G-Y
B-Y
VR9003
PEDESTAL LEVEL
VR9001
WHITE BALANCE
VR9002
WHITE BALANCE
VR9004
CONTRAST
TP9001
TP9003
TP9002
TP9005
TP9004
TP9006
VR9010
CENTERING
IC9003 (A/D CONVERTER)
R SIGNAL
G SIGNAL
B SIGNAL
G CLAMP
B CLAMP
R CLAMP
VR9008
CLAMP LEVEL CONTROL (BLUE)
VR9007
CLAMP LEVEL CONTROL (RED)
R DATA SELECT SIGNAL
G DATA SELECT SIGNAL
B DATA SELECT SIGNAL
CLAMP SWITCH
PICTURE DATA 5
PICTURE DATA 4
PICTURE DATA 3
PICTURE DATA 2
PICTURE DATA 1
PICTURE DATA 0
CLOCK
A/D CONVERTER CONTROL
IC9002 (LCD PANEL INDICATION CONTROL)
VCD
PICTURE INVERTER
L.C.D. Y DRIVE CONTROL
GCP GENERATOR
VERTICAL COUNT DOWN
HORIZONTAL COUNT DOWN
H SYNC/ V SYNC PULSE GENERATOR
Q9003 (SWITCH)
Q9004 (SWITCH)
T9001
P9002
BACK LIGHT
VR9011
BRIGHT
VR9012
LUMINANCE LEVEL
Q9002
BUFFER
Q9001
COMPARATOR
IC9004 (DR DATA)
Q9005 (SWITCHING)
IC9006 (INVERTER)

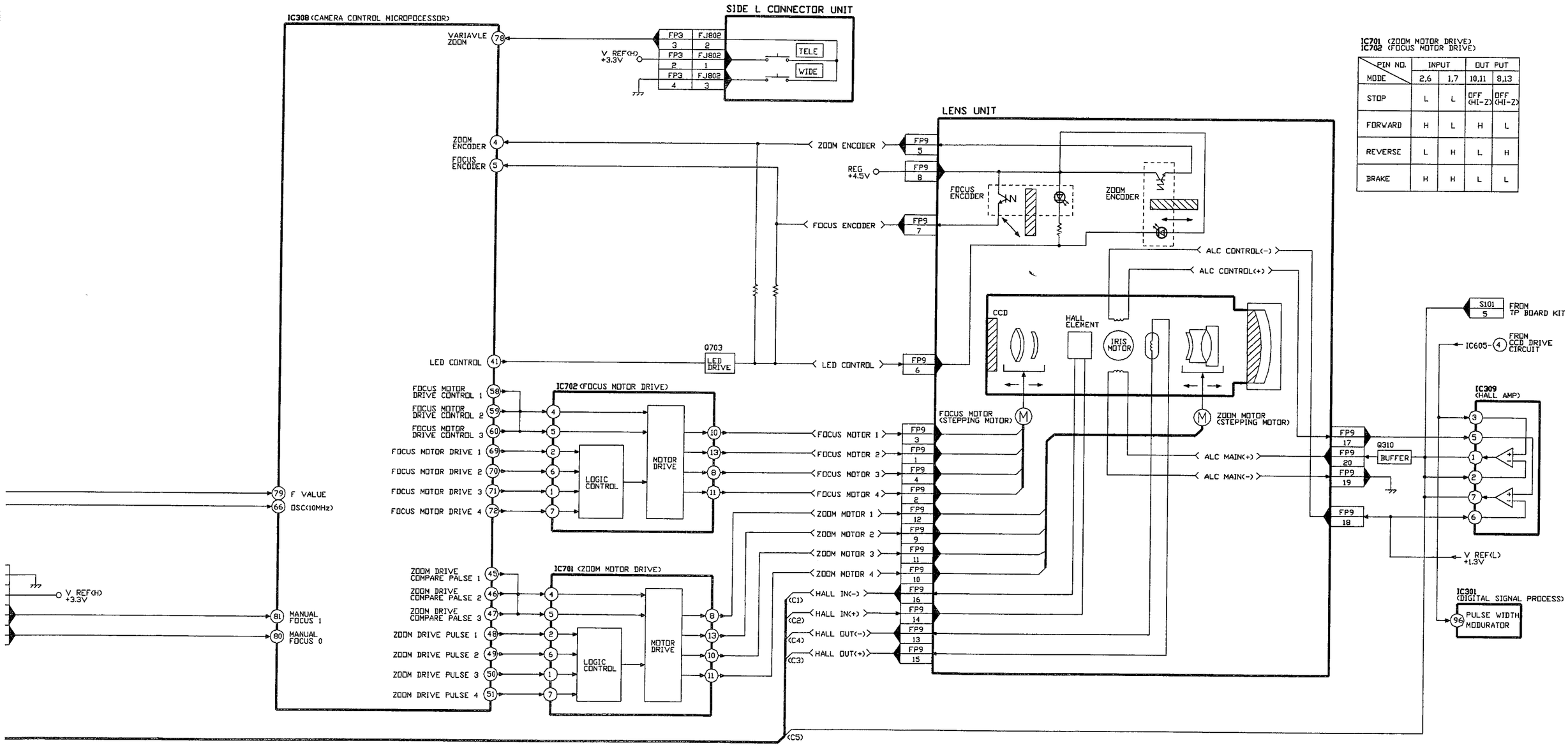
IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED BY THE ⚠ SYMBOL HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.



AF BLOCK DIAGRAM





IC701 (ZOOM MOTOR DRIVE)
IC702 (FOCUS MOTOR DRIVE)

PIN NO. / MODE	INPUT 2,6	INPUT 1,7	OUT PUT 10,11	OUT PUT 8,13
STOP	L	L	OFF (HI-Z)	OFF (HI-Z)
FORWARD	H	L	H	L
REVERSE	L	H	L	H
BRAKE	H	H	L	L

COLOR EVF BLOCK DIAGRAM (MODEL:B)

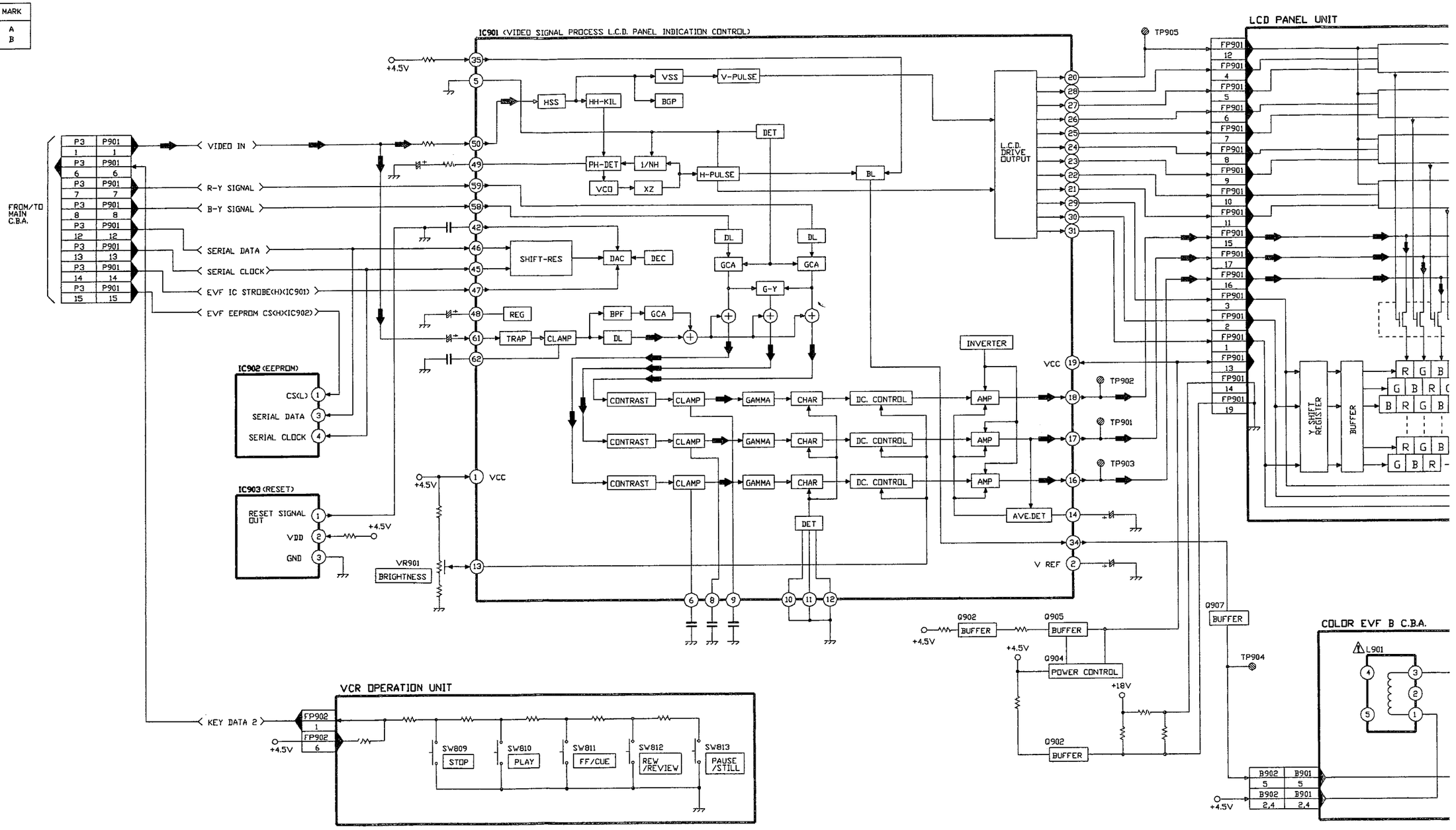
IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED BY THE ⚠ SYMBOL HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

VIDEO SIGNAL PATH

COMPARISON CHART OF MODELS & MARKS

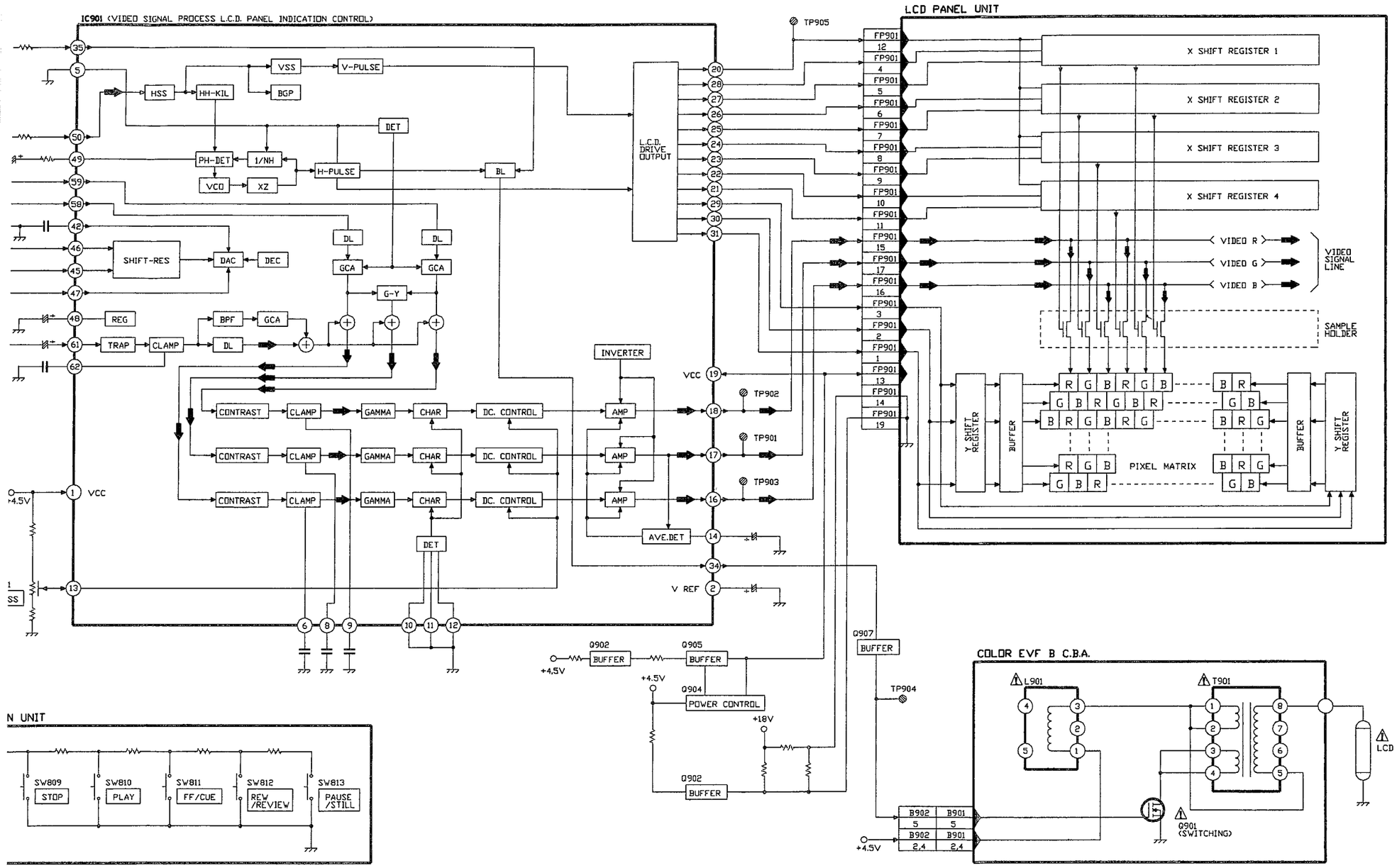
MODEL	MARK
PV-L657 PV-L757	A B



L:B)

IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED BY THE ⚠ SYMBOL HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.



EVF BLOCK DIAGRAM (MODEL:A)

IMPORTANT SAFETY NOTICE:

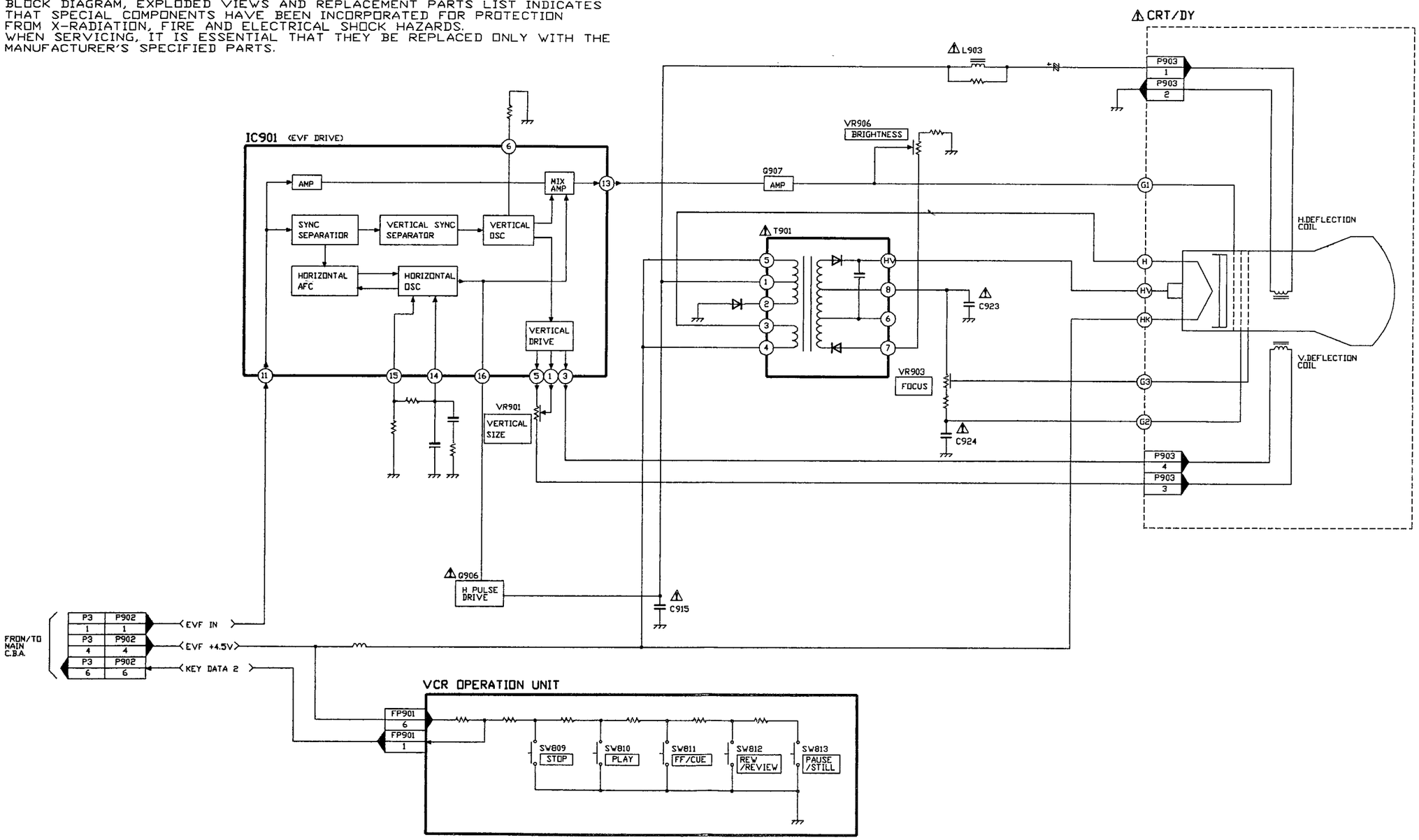
COMPONENTS IDENTIFIED BY THE ⚠ SYMBOL HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

PRODUCT SAFETY NOTICE:

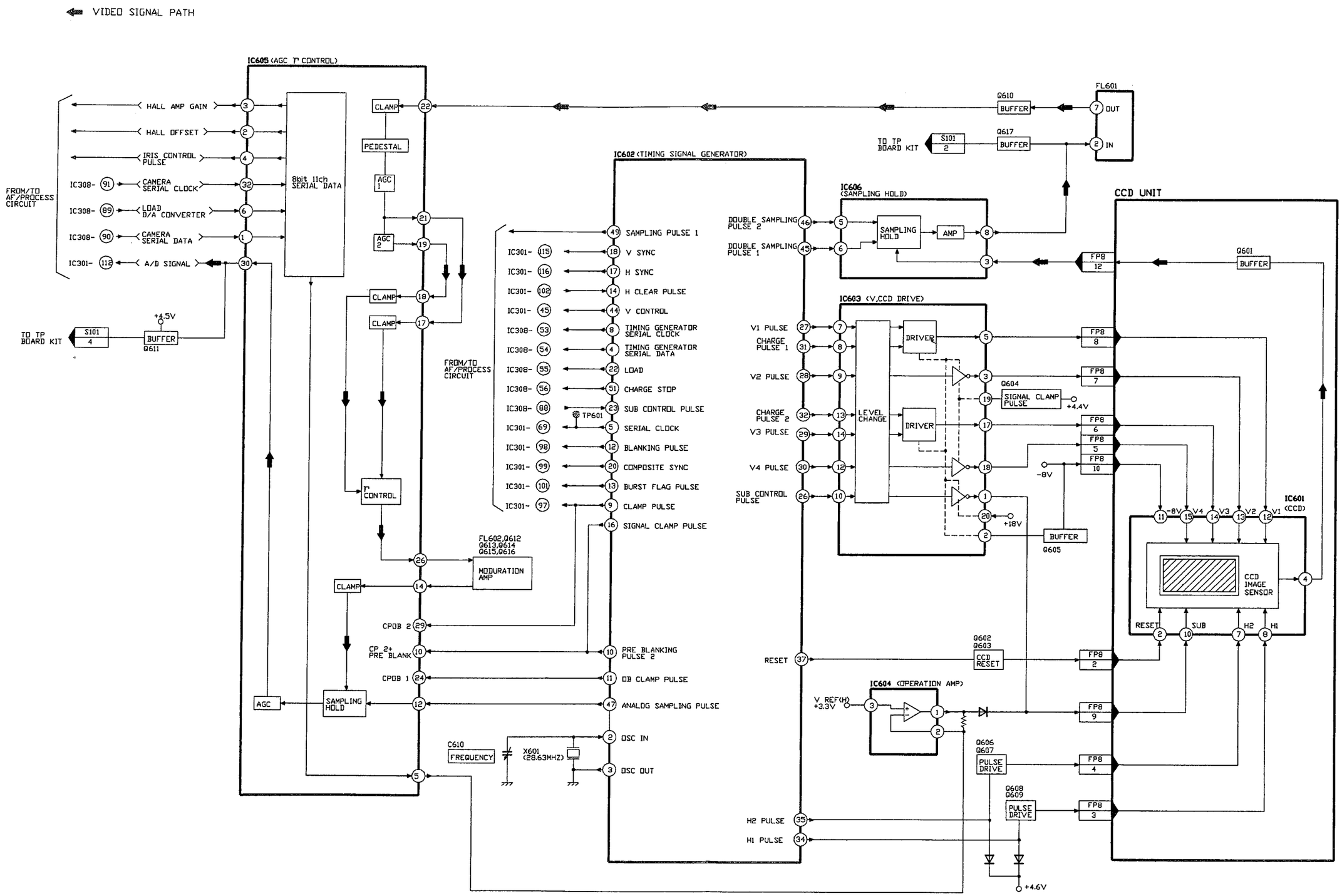
THE ⚠ SYMBOL IN THE EVF SCHEMATIC DIAGRAM, CIRCUIT BOARD LAYOUT, BLOCK DIAGRAM, EXPLODED VIEWS AND REPLACEMENT PARTS LIST INDICATES THAT SPECIAL COMPONENTS HAVE BEEN INCORPORATED FOR PROTECTION FROM X-RADIATION, FIRE AND ELECTRICAL SHOCK HAZARDS. WHEN SERVICING, IT IS ESSENTIAL THAT THEY BE REPLACED ONLY WITH THE MANUFACTURER'S SPECIFIED PARTS.

COMPARISON CHART OF MODELS & MARKS

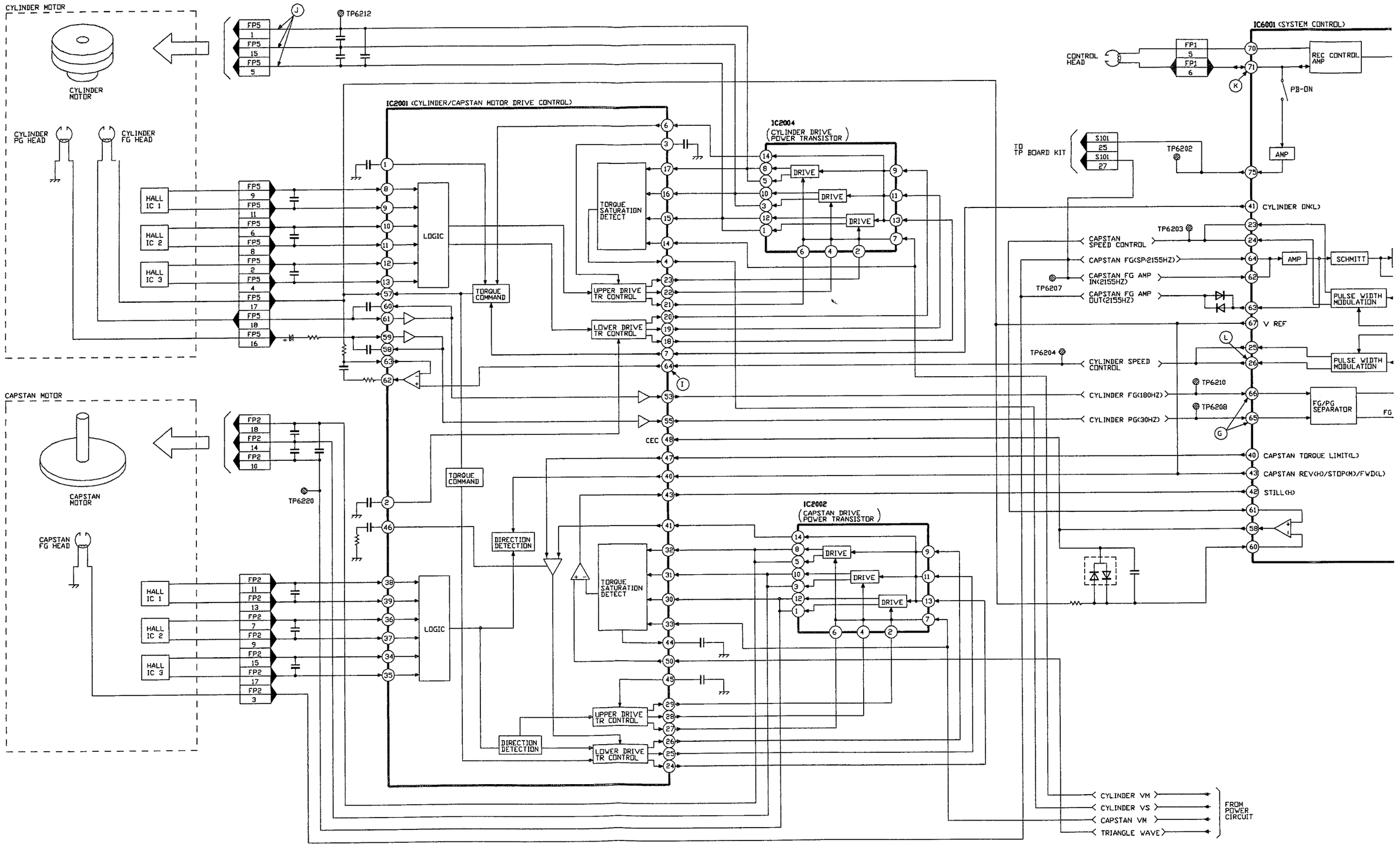
MODEL	MARK
PV-L657 PV-L757	A B

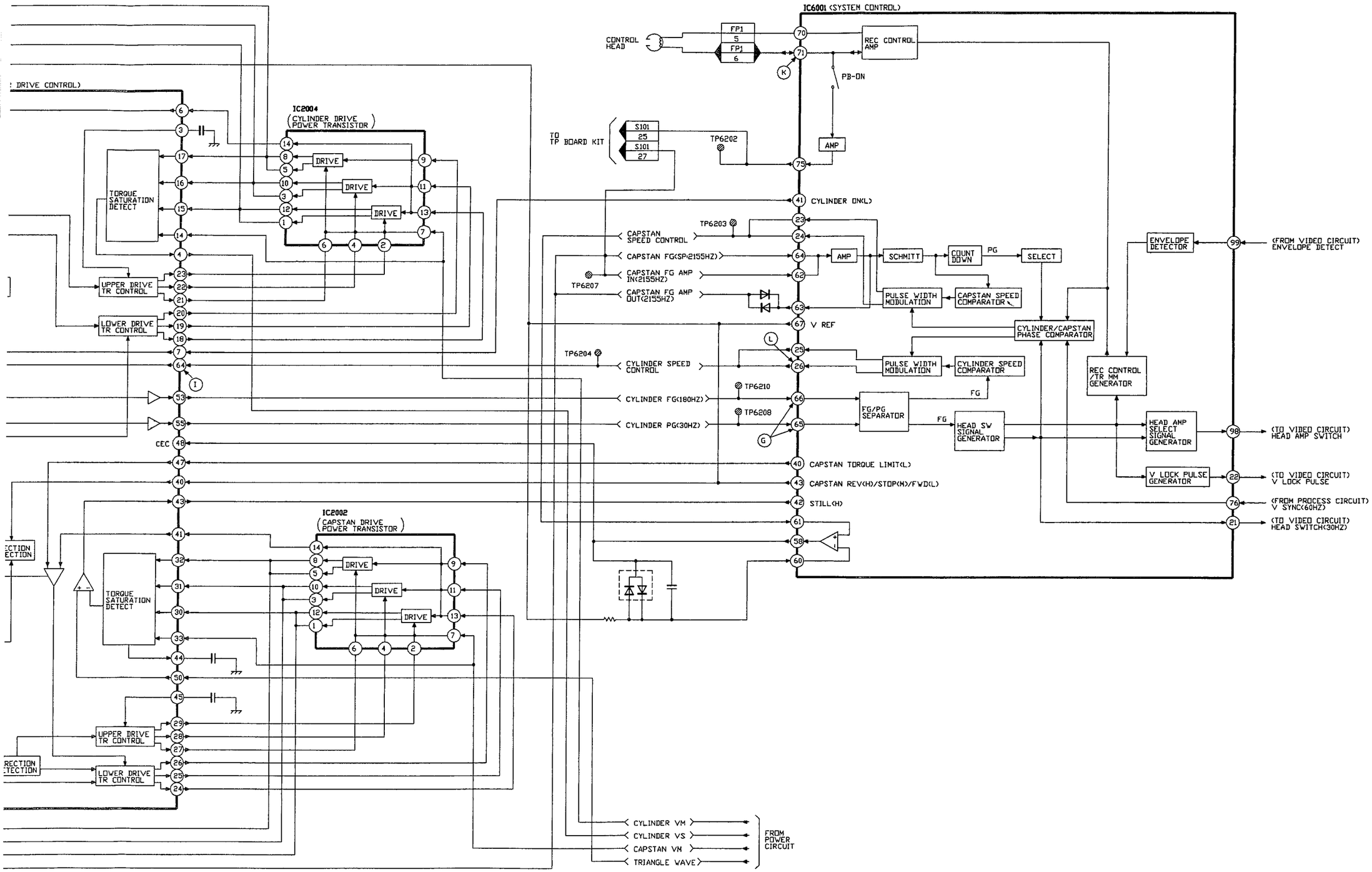


CCD DRIVE BLOCK DIAGRAM



SERVO BLOCK DIAGRAM




DRIVE CONTROL)
IC2004
(CYLINDER DRIVE POWER TRANSISTOR)
TORQUE SATURATION DETECT
DRIVE
UPPER DRIVE TR CONTROL
LOWER DRIVE TR CONTROL
CEC
IC2002
(CAPSTAN DRIVE POWER TRANSISTOR)
IC6001 (SYSTEM CONTROL)
CONTROL HEAD
FP1 5
FP1 6
REC CONTROL AMP
PB-ON
AMP
TO TP BOARD KIT
S101 25
S101 27
TP6202
CYLINDER ON(L)
TP6203
CAPSTAN SPEED CONTROL
CAPSTAN FG(SP:2155HZ)
TP6207
CAPSTAN FG AMP IN(2155HZ)
CAPSTAN FG AMP OUT(2155HZ)
SCHMITT
COUNT DOWN
PG
SELECT
PULSE WIDTH MODULATION
CAPSTAN SPEED COMPARATOR
V REF
CYLINDER/CAPSTAN PHASE COMPARATOR
TP6204
CYLINDER SPEED CONTROL
CYLINDER SPEED COMPARATOR
TP6210
CYLINDER FG(180HZ)
TP6208
CYLINDER PG(30HZ)
FG/PG SEPARATOR
FG
HEAD SW SIGNAL GENERATOR
CAPSTAN TORQUE LIMIT(L)
CAPSTAN REV(H)/STOP(M)/FWD(L)
STILL(H)
ENVELOPE DETECTOR
(FROM VIDEO CIRCUIT) ENVELOPE DETECT
REC CONTROL /TR MM GENERATOR
HEAD AMP SELECT SIGNAL GENERATOR
(TO VIDEO CIRCUIT) HEAD AMP SWITCH
V LOCK PULSE GENERATOR
(TO VIDEO CIRCUIT) V LOCK PULSE
(FROM PROCESS CIRCUIT) V SYNC(60HZ)
(TO VIDEO CIRCUIT) HEAD SWITCH(30HZ)
CYLINDER VM
CYLINDER VS
CAPSTAN VM
TRIANGLE WAVE
FROM POWER CIRCUIT

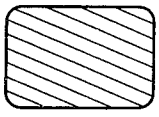
SYSTEM CONTROL & SERVO CHECKING PROCEDURE

SYMPTOM		FLOW OF TROUBLESHOOT →				
AUTO POWER OFF	CHECK POINT	Ⓐ	Ⓒ	Ⓖ	———	———
	IF NO	⬇	⬇	⬇	⬇	⬇
	CHECK OR CHANGE	IC6006 & POWER CIRCUIT	IC6007	✻ NOTE1	LOADING MOTOR	✻ NOTE2

✻ NOTE1 : Check IC2001 or Cylinder unit.

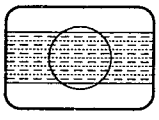
✻ NOTE2 : Check Mechanism Alignment.

SYMPTOM		FLOW OF TROUBLESHOOT →				
DEAD OR MALFUNCTION	CHECK POINT	Ⓑ	Ⓕ			
	IF NO	⬇	⬇			
	CHECK OR CHANGE	IC6001	IC6002			

SYMPTOM		FLOW OF TROUBLESHOOT →				
 DISTORTED PLAYBACK PICTURE(1)	CHECK POINT	Ⓘ	Ⓙ	———	Ⓛ	
	IF NO	⬇	⬇	⬇	⬇	
	CHECK OR CHANGE	IC6001 ✻ NOTE1	IC2001 IC2004	✻ NOTE2	FG HEAD	

✻ NOTE1 : Check Pins (24) and (26) of IC6001.

✻ NOTE2 : Open Pin (64) of IC2001 and supply external 2.5V DC to Pin (64) . Then, if Picture is improved, change IC6001. If picture is still the same, change IC2001.

SYMPTOM		FLOW OF TROUBLESHOOT →				
 DISTORTED PLAYBACK PICTURE(2)	CHECK POINT	Ⓚ	———			
	IF NO	⬇	⬇			
	CHECK OR CHANGE	✻ NOTE1	✻ NOTE2			

✻ NOTE1 : Check Tape Travel and clean A/C Head.

✻ NOTE2 : Open Pin (64) of IC2001 and supply external 2.5V DC to Pin (64) . Then, if Picture is improved, change IC6001. If picture is still the same, change IC2001.

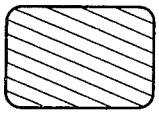
SYSTEM CONTROL & SERVO CHECKING PROCEDURE

SYMPTOM		FLOW OF TROUBLESHOOT →				
AUTO POWER OFF	CHECK POINT	Ⓐ	Ⓒ	Ⓖ	———	———
	IF NO	⬇	⬇	⬇	⬇	⬇
	CHECK OR CHANGE	IC6006 & POWER CIRCUIT	IC6007	✻ NOTE1	LOADING MOTOR	✻ NOTE2

✻ NOTE1 : Check IC2001 or Cylinder unit.

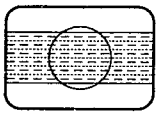
✻ NOTE2 : Check Mechanism Alignment.

SYMPTOM		FLOW OF TROUBLESHOOT →				
DEAD OR MALFUNCTION	CHECK POINT	Ⓑ	Ⓕ			
	IF NO	⬇	⬇			
	CHECK OR CHANGE	IC6001	IC6002			

SYMPTOM		FLOW OF TROUBLESHOOT →				
 DISTORTED PLAYBACK PICTURE(1)	CHECK POINT	Ⓘ	Ⓙ	———	Ⓛ	
	IF NO	⬇	⬇	⬇	⬇	
	CHECK OR CHANGE	IC6001 ✻ NOTE1	IC2001 IC2004	✻ NOTE2	FG HEAD	

✻ NOTE1 : Check Pins (24) and (26) of IC6001.

✻ NOTE2 : Open Pin (64) of IC2001 and supply external 2.5V DC to Pin (64) . Then, if Picture is improved, change IC6001. If picture is still the same, change IC2001.

SYMPTOM		FLOW OF TROUBLESHOOT →				
 DISTORTED PLAYBACK PICTURE(2)	CHECK POINT	Ⓚ	———			
	IF NO	⬇	⬇			
	CHECK OR CHANGE	✻ NOTE1	✻ NOTE2			

✻ NOTE1 : Check Tape Travel and clean A/C Head.

✻ NOTE2 : Open Pin (64) of IC2001 and supply external 2.5V DC to Pin (64) . Then, if Picture is improved, change IC6001. If picture is still the same, change IC2001.

SYSTEM CONTROL BLOCK DIAGRAM

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-L657	A
PV-L757	B

IC6001 KEY MATRIX CHART

SCAN OUT / KEY IN	SCAN 1 (PIN 93)	SCAN 2 (PIN 92)	SCAN 3 (PIN 91)	SCAN 4 (PIN 90)
KEY IN 3 (PIN 56)	POWER SWITCH			EJECT (SW801)
	OFF	CAMERA	VCR	

VOLTAGE	0~0.45(V)	0.45~1.35(V)	1.35~2.25(V)	2.25~3.15(V)	3.15~4.05(V)
KEY DATA 1 (PIN 84)	CLOCK DOWN (SW818)	CLOCK SET UP (SW817)	TITLE (SW804)	——	——
KEY DATA 2 (PIN 83)	STOP (SW809)	PLAY (SW810)	FF/CUE (SW811)	REW/REVIEW (SW812)	STILL (SW813)
KEY DATA 3 (PIN 86)	LIGHT ON (SW803)	LIGHT AUTO (SW803)	——	——	——

OPERATION BOARDS

LIGHT, ON, OFF, AUTO, EJECT, DISPLAY, TITLE

FP3 20 / FP3 14 / FP3 13 / FP3 12 / FP3 18

FP902 1 | P901 6 | P3 6

FOCUS/POWER UNIT: CAMERA, POWER, OFF, VCR

FJ803 FP4: 4 4 / 3 3 / 2 2 / 1 1

SIDE L CONNECTOR UNIT: CLOCK SET UP, REC, POWER, REC, SP/SLP, CLOCK DOWN, DEW SENSOR

FJ802 12 / FJ802 FP3 7 8 / 5 6 / 8 9 / 4 5 / 6 7 / FJ802 13 / FJ802 FP3 9 10

<DEW>

TO LCD C.B.A.: P9001 6 | P2 6 | P1 4 | P2 4 <VIDEO PB(L)>

IC6001 (SYSTEM CONTROL)

TO TP BOARD KIT: S101 24 / S101 27

TP6207

FROM CAPSTAN FG HEAD: FP2 3

FROM/TO AF CIRCUIT: IC307- (2), IC307- (15), IC308- (9)

FROM/TO POWER CIRCUIT: Q6012 POWER DOWN DETECT

FROM/TO VIDEO CIRCUIT: IC3001- (61), Q3001

63	CAPSTAN FG AMP OUT(2155HZ)	
62	CAPSTAN FG AMP IN(2155HZ)	
64	CAPSTAN FG(2155HZ)	
86	KEY DATA 3	
13	CAMERA SERIAL CLOCK	
14	CAMERA SERIAL DATA	
15	VCR SERIAL DATA	
2	DISPLAY SW(L)	
84	KEY DATA 1	
83	KEY DATA 2	
92	SCAN 2	
93	SCAN 1	
91	SCAN 3	
56	KEY IN 1	
4	KEY IN 1	
90	SCAN 4	
3	KEY IN 2	
69	PULL UP	
9	CAMERA POWER ON(H)	
94	REC LED ON(L)	
55	REC/PAUSE SW(L)	
95	POWER LED ON(L)	
33	OSC IN(8MHZ)	
34	OSC OUT(8MHZ)	
1	SP(L)/SLP(H)	
2	DEW ON(H)	
76	V SYNC(60HZ)	
39	VIDEO PB(L)	

Q6020 REC LED DRIVE; Q6011 (SENSOR LED DRIVE); LED +5V

X6001 OSC (8MHZ)

TP6003

48	SAFETY TAB SW(L)	
57	CASSETTE DOWN(L)	
50	MODE SWITCH 1	
49	MODE SWITCH 2	
96	TAKEUP REEL PULSE	
80	SUPPLY REEL PULSE	
89	SENSOR LED PULSE	
82	SUPPLY PHOTO TR' ON(L)	
65	CYLINDER PG(30HZ)	
66	CYLINDER FG(180HZ)	
40	CAPSTAN TORQUE LIMIT(L)	
43	CAPSTAN REV(H) /STOP(M)/FWD(L)	
26	CYLINDER SPEED CONTROL	
25	CYLINDER PHASE CONTROL	
41	CYLINDER ON(L)	
67	V REF	
42	STILL(H)	
24	CAPSTAN SPEED CONTROL	
23	CAPSTAN PHASE CONTROL	
61	AMP(+)	
58	AMP OUT	
60	AMP(-)	

Q6022; TP6004; Q6013 SENSOR LED DRIVE; TP6006; TP6007; REG +5V; TP6208; TP6210; TP6204; TP6203

FROM/TO SERVO CIRCUIT: IC2001- (55), (53), (47), (40), (64), (7), (43)

FROM SERVO CIRCUIT: IC2001- (57), (48)

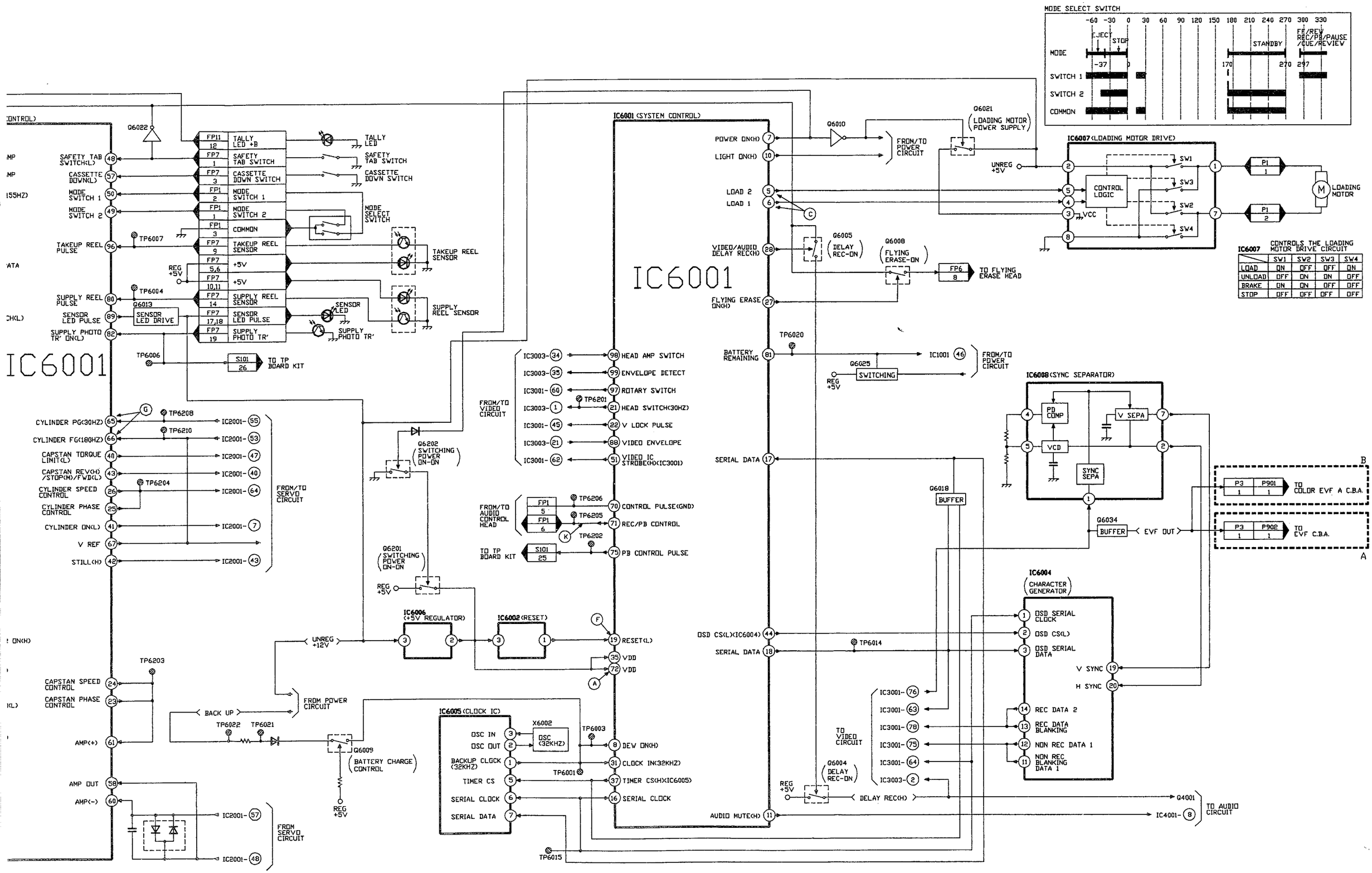
FP11 12	TALLY LED +B	TALLY LED
FP7 1	SAFETY TAB SW	SAFETY TAB SWITCH
FP7 3	CASSETTE DOWN SW	CASSETTE DOWN SWITCH
FP1 2	MODE SW 1	MODE SELECT SWITCH
FP1 1	MODE SW 2	
FP1 3	COMMON	
FP7 9	TAKEUP REEL SENSOR	
FP7 5,6	+5V	
FP7 10,11	+5V	
FP7 14	SUPPLY REEL SENSOR	
FP7 17,18	SENSOR LED PULSE	SENSOR LED
FP7 19	SUPPLY PHOTO TR'	SUPPLY PHOTO TR'

S101 26 TO TP BOARD KIT

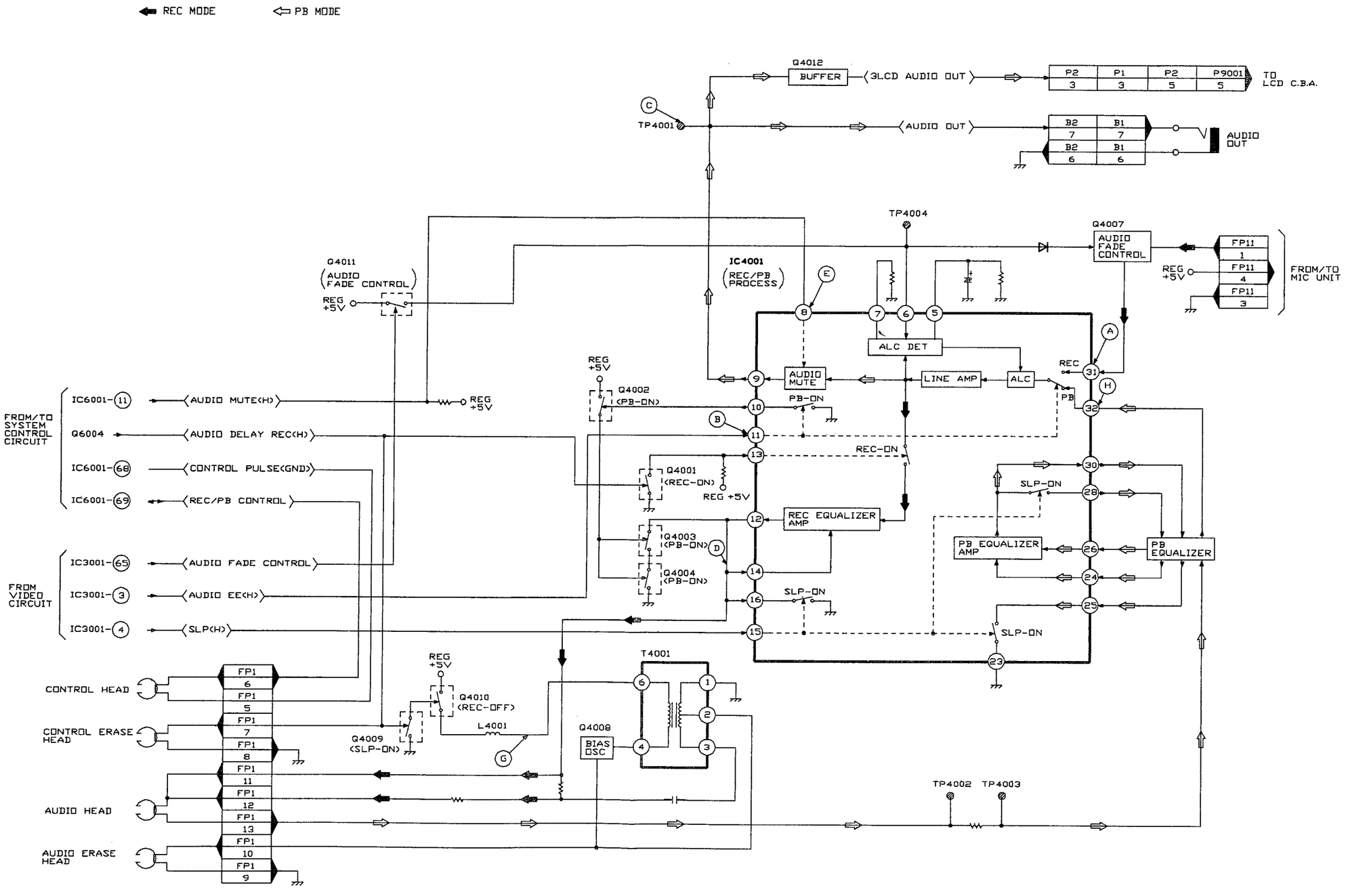
Q6201 (SWITCHING POWER ON-ON); REG +5V; IC6006 (+5V R

UNREG +12V; FROM POWER CIRCUIT; BACK UP; TP6022; TP6021; Q6009 (BATTERY CHARGE CONTROL); REG +5V

IC6001


MODE SELECT SWITCH
-60 -30 0 30 60 90 120 150 180 210 240 270 300 330
EJECT
STOP
STANDBY
FF/REW
REC/PB/PAUSE
/CUE/REVIEW
MODE
SWITCH 1
SWITCH 2
COMMON
-37
170
270
297
IC6001 (SYSTEM CONTROL)
IC6001
IC6007 (LOADING MOTOR DRIVE)
CONTROL LOGIC
SW1
SW2
SW3
SW4
VCC
UNREG +5V
LOADING MOTOR
IC6007 CONTROLS THE LOADING MOTOR DRIVE CIRCUIT
LOAD ON OFF OFF ON
UNLOAD OFF ON ON OFF
BRAKE ON ON OFF OFF
STOP OFF OFF OFF OFF
IC6008 (SYNC SEPARATOR)
PD COMP
VCO
SYNC SEPA
V SEPA
IC6004
CHARACTER GENERATOR
OSD SERIAL CLOCK
OSD CS(L)
OSD SERIAL DATA
V SYNC
H SYNC
REC DATA 2
REC DATA BLANKING
NON REC DATA 1
NON REC BLANKING DATA 1
IC6005 (CLOCK IC)
OSC IN
OSC OUT
BACKUP CLOCK (32KHZ)
TIMER CS
SERIAL CLOCK
SERIAL DATA
X6002
OSC (32KHZ)
IC6006 (+5V REGULATOR)
IC6002 (RESET)
RESET(L)
VDD
Q6022
Q6010
Q6021 (LOADING MOTOR POWER SUPPLY)
Q6005 (DELAY REC-ON)
Q6008 (FLYING ERASE-ON)
Q6013
Q6025 SWITCHING
Q6018 BUFFER
Q6034 BUFFER
Q6202 SWITCHING POWER ON-ON
Q6201 SWITCHING POWER ON-ON
Q6009 (BATTERY CHARGE CONTROL)
Q6004 (DELAY REC-ON)
TP6007
TP6004
TP6006
TP6208
TP6210
TP6204
TP6203
TP6022
TP6021
TP6201
TP6206
TP6205
TP6202
TP6020
TP6003
TP6001
TP6014
TP6015
FP11 12 TALLY LED +B
FP7 1 SAFETY TAB SWITCH
FP7 3 CASSETTE DOWN SWITCH
FP1 2 MODE SWITCH 1
FP1 1 MODE SWITCH 2
FP1 3 COMMON
FP7 9 TAKEUP REEL SENSOR
FP7 5,6 +5V
FP7 10,11 +5V
FP7 14 SUPPLY REEL SENSOR
FP7 17,18 SENSOR LED PULSE
FP7 19 SUPPLY PHOTO TR'
S101 26 TO TP BOARD KIT
S101 25
FP6 8 TO FLYING ERASE HEAD
P1 1
P1 2
P3 1 P901 1 TO COLOR EVF A C.B.A.
P3 1 P902 1 TO EVF C.B.A.
TALLY LED
SAFETY TAB SWITCH
CASSETTE DOWN SWITCH
MODE SELECT SWITCH
TAKEUP REEL SENSOR
SUPPLY REEL SENSOR
SENSOR LED
SUPPLY PHOTO TR'
SAFETY TAB SWITCH(L)
CASSETTE DOWN(L)
MODE SWITCH 1
MODE SWITCH 2
TAKEUP REEL PULSE
SUPPLY REEL PULSE
SENSOR LED PULSE
SUPPLY PHOTO TR' ON(L)
SENSOR LED DRIVE
CYLINDER PG(30HZ)
CYLINDER FG(180HZ)
CAPSTAN TORQUE LIMIT(L)
CAPSTAN REV(H) /STOP(M)/FWD(L)
CYLINDER SPEED CONTROL
CYLINDER PHASE CONTROL
CYLINDER ON(L)
V REF
STILL(H)
CAPSTAN SPEED CONTROL
CAPSTAN PHASE CONTROL
AMP(+)
AMP OUT
AMP(-)
IC2001-55
IC2001-53
IC2001-47
IC2001-40
IC2001-64
IC2001-7
IC2001-43
IC2001-57
IC2001-48
FROM/TO SERVO CIRCUIT
FROM SERVO CIRCUIT
IC3003-34 98 HEAD AMP SWITCH
IC3003-35 99 ENVELOPE DETECT
IC3001-60 97 ROTARY SWITCH
IC3003-1 21 HEAD SWITCH(30HZ)
IC3001-45 22 V LOCK PULSE
IC3003-21 88 VIDEO ENVELOPE
IC3001-62 51 VIDEO IC STROBE(H)(IC3001)
FROM/TO VIDEO CIRCUIT
FROM/TO AUDIO CONTROL HEAD
FP1 5
FP1 6
70 CONTROL PULSE(GND)
71 REC/PB CONTROL
75 PB CONTROL PULSE
TO TP BOARD KIT
POWER ON(H) 7
LIGHT ON(H) 10
LOAD 2 5
LOAD 1 6
VIDEO/AUDIO DELAY REC(H) 28
FLYING ERASE ON(H) 27
BATTERY REMAINING 81
SERIAL DATA 17
OSD CS(L)(IC6004) 44
SERIAL DATA 18
AUDIO MUTE(H) 11
FROM/TO POWER CIRCUIT
IC1001 46
FROM/TO POWER CIRCUIT
IC3001-76
IC3001-63
IC3001-78
IC3001-75
IC3001-64
IC3003-2
TO VIDEO CIRCUIT
DELAY REC(H)
Q4001
IC4001-8
TO AUDIO CIRCUIT
EVF OUT
BACK UP
UNREG +12V
REG +5V
FROM POWER CIRCUIT
DEW ON(H) 8
CLOCK IN(32KHZ) 31
TIMER CS(H)(IC6005) 37
SERIAL CLOCK 16
VDD 35
VDD 72
A
B
F
K

AUDIO BLOCK DIAGRAM



AUDIO CHECKING PROCEDURE

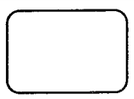
SYMPTOM		FLOW OF TROUBLESHOOT →				
NO AUDIO RECORDING	CHECK POINT	Ⓐ	Ⓒ	Ⓓ	Ⓖ	———
	IF NO	⬇	⬇	⬇	⬇	⬇
	CHECK OR CHANGE	✻ NOTE1	Ⓑ Ⓔ IC4001	IC4001	✻ NOTE2	✻ NOTE3

✻ NOTE1 : Check Mic Unit or A/V Jack.
✻ NOTE2 : Check Pin (28) of IC6001 and Q6004 AND Q6005.
✻ NOTE3 : Check Tape Travel and clean A/C Head.

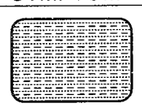
SYMPTOM		FLOW OF TROUBLESHOOT →				
NO AUDIO PLAYBACK	CHECK POINT	Ⓗ	Ⓒ			
	IF NO	⬇	⬇			
	CHECK OR CHANGE	IC4001 PB EQUALIZER ✻ NOTE1	Ⓑ Ⓔ IC4001			

✻ NOTE1 : Check Tape Travel and clean A/C Head. Check Pin (29) of IC4001.

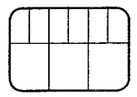
VIDEO CHECKING PROCEDURE

SYMPTOM		FLOW OF TROUBLESHOOT →				
 NO PICTURE	CHECK POINT	Ⓐ	Ⓔ	Ⓒ	Ⓓ	
	IF NO	⬇	⬇	⬇	⬇	
	CHECK OR CHANGE	CAMERA PROCESS SECTION	IC3001 ✻ NOTE1	IC3001 ✻ NOTE2	IC3001 ✻ NOTE3	

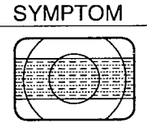
✻ NOTE1 : Check Pin (80) of IC3001.
✻ NOTE2 : Check Signal E-E (H) Pin (3) of IC3001.
✻ NOTE3 : Check Pin (75) of IC3001.

SYMPTOM		FLOW OF TROUBLESHOOT →				
 NO REC	CHECK POINT	✻ NOTE1	Ⓕ	Ⓙ	HEAD	
	IF NO	———	⬇	⬇	⬇	
	CHECK OR CHANGE	———	IC3001 ✻ NOTE2	IC3003	UPPER CYLINDER ✻ NOTE3	

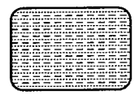
✻ NOTE1 : Check above check point for NO PICTURE.
✻ NOTE2 : Check Pin (3) of IC3001.
✻ NOTE3 : Try Head Cleaning.

SYMPTOM		FLOW OF TROUBLESHOOT →				
 NO COLOR	CHECK POINT	Ⓖ	Ⓝ	Ⓜ	Ⓒ	
	IF NO	⬇	⬇	⬇	⬇	
	CHECK OR CHANGE	CAMERA PROCESS SECTION	IC3001 (SELF-RECORDING) ✻ NOTE1	IC3001 (PLAYBACK)	IC3001 ✻ NOTE2	

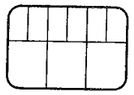
✻ NOTE1 : Check Pin (31) of IC3003 in RECORDING MODE.
✻ NOTE2 : Check Pins (13) of IC3001.

SYMPTOM		FLOW OF TROUBLESHOOT →			
 NO PICTURE	CHECK POINT	Ⓣ	Ⓜ Ⓡ	———	
	IF NO	⬇	⬇	⬇	
	CHECK OR CHANGE	CAMERA PROCESS SECTION	IC3003 UPPER CYLINDER ✻ NOTE1	SEE SERVO SECTION	

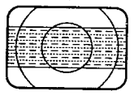
✻ NOTE1 : Try Head Cleaning and check Shield Case for Head Amp.

SYMPTOM		FLOW OF TROUBLESHOOT →			
 NO REC	CHECK POINT	Ⓜ Ⓡ	Ⓒ	———	
	IF NO	⬇	⬇	⬇	
	CHECK OR CHANGE	IC3003 UPPER CYLINDER ✻ NOTE1	IC3001	SEE SERVO SECTION	

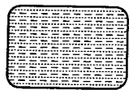
✻ NOTE1 : Try Head Cleaning and check Shield Case for Head Amp.

SYMPTOM		FLOW OF TROUBLESHOOT →				
	CHECK POINT	G	N	M	C	
	IF NO	↓	↓	↓	↓	
NO COLOR	CHECK OR CHANGE	CAMERA PROCESS SECTION	IC3001 (SELF-RECORDING) ✻NOTE1	IC3001 (PLAYBACK)	IC3001 ✻NOTE2	

✻NOTE1 : Check Pin (31) of IC3003 in RECORDING MODE
✻NOTE2 : Check Pins (13) of IC3001.

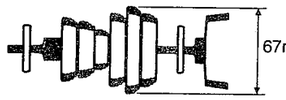
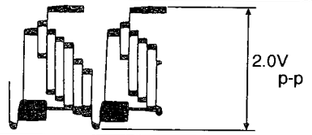
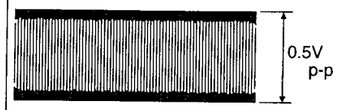
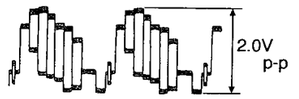
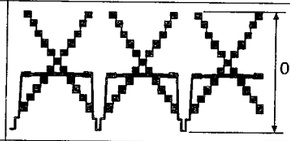
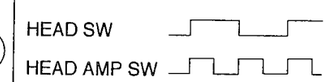
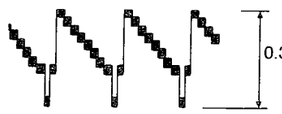
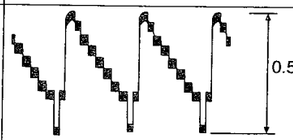
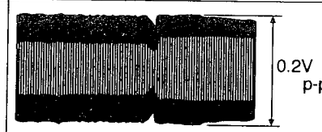
SYMPTOM		FLOW OF TROUBLESHOOT →			
	CHECK POINT	T	M R	———	
	IF NO	↓	↓	↓	
NO PICTURE	CHECK OR CHANGE	CAMERA PROCESS SECTION	IC3003 UPPER CYLINDER ✻NOTE1	SEE SERVO SECTION	

✻NOTE1 : Try Head Cleaning and check Shield Case for Head Amp.

SYMPTOM		FLOW OF TROUBLESHOOT →			
	CHECK POINT	M R	C	———	
	IF NO	↓	↓	↓	
NO REC	CHECK OR CHANGE	IC3003 UPPER CYLINDER ✻NOTE1	IC3001	SEE SERVO SECTION	

✻NOTE1 : Try Head Cleaning and check Shield Case for Head Amp.

WAVEFORM FOR VIDEO

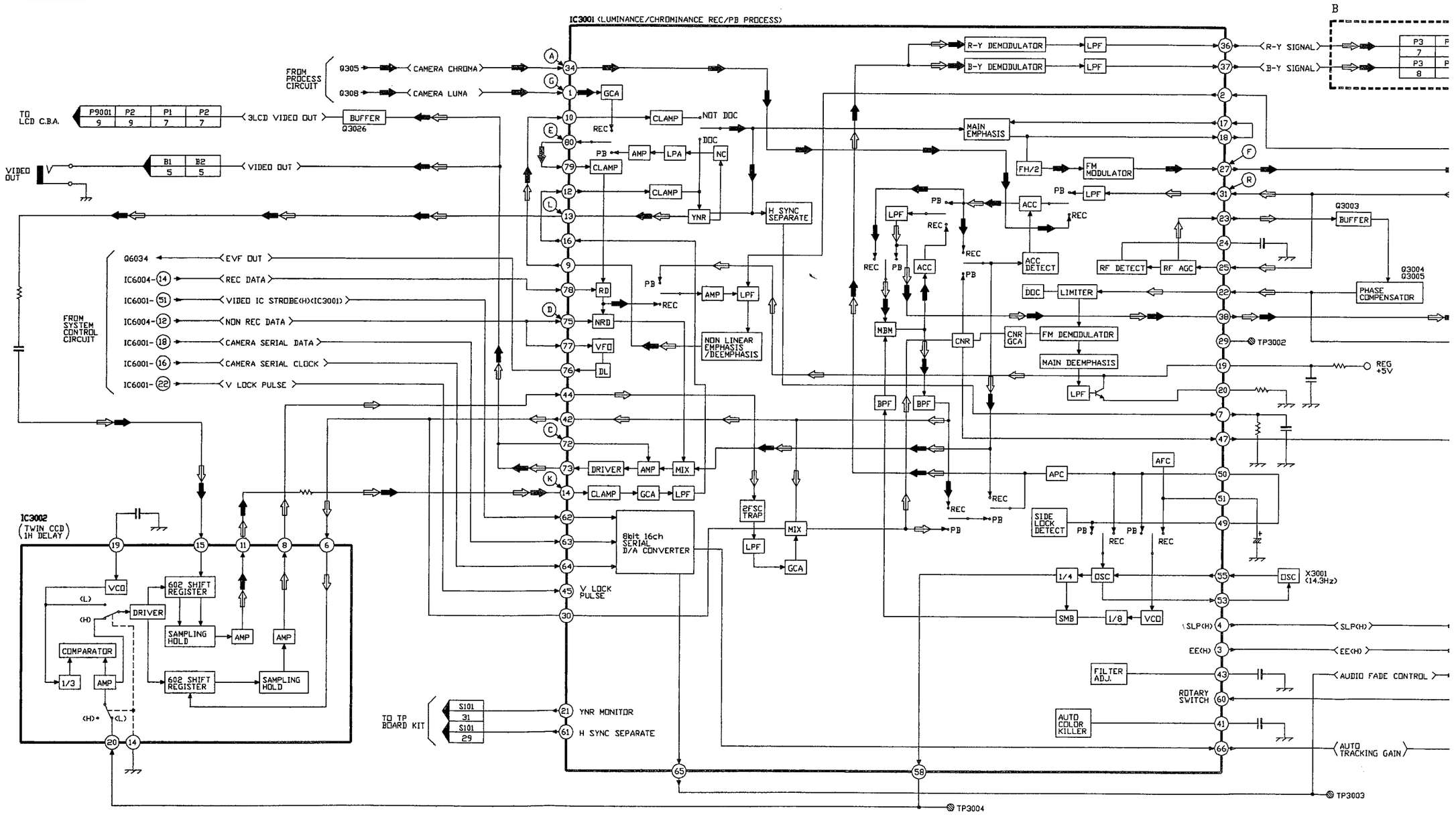
No.	WAVEFORM	REMARK	No.	WAVEFORM	REMARK
A	 67mV p-p		R	0.5V p-p	PB
C	 2.0V p-p	REC/PB	S	 0.5V p-p	PB
D	 2.0V p-p	REC/PB			
E	1.0V p-p	REC			
G	 0.8V p-p				
T	 HEAD SW HEAD AMP SW				
K	 0.3V p-p	PB			
L	 0.5V p-p	PB			
M	 0.2V p-p	PB			
N	8.0mV p-p	REC			

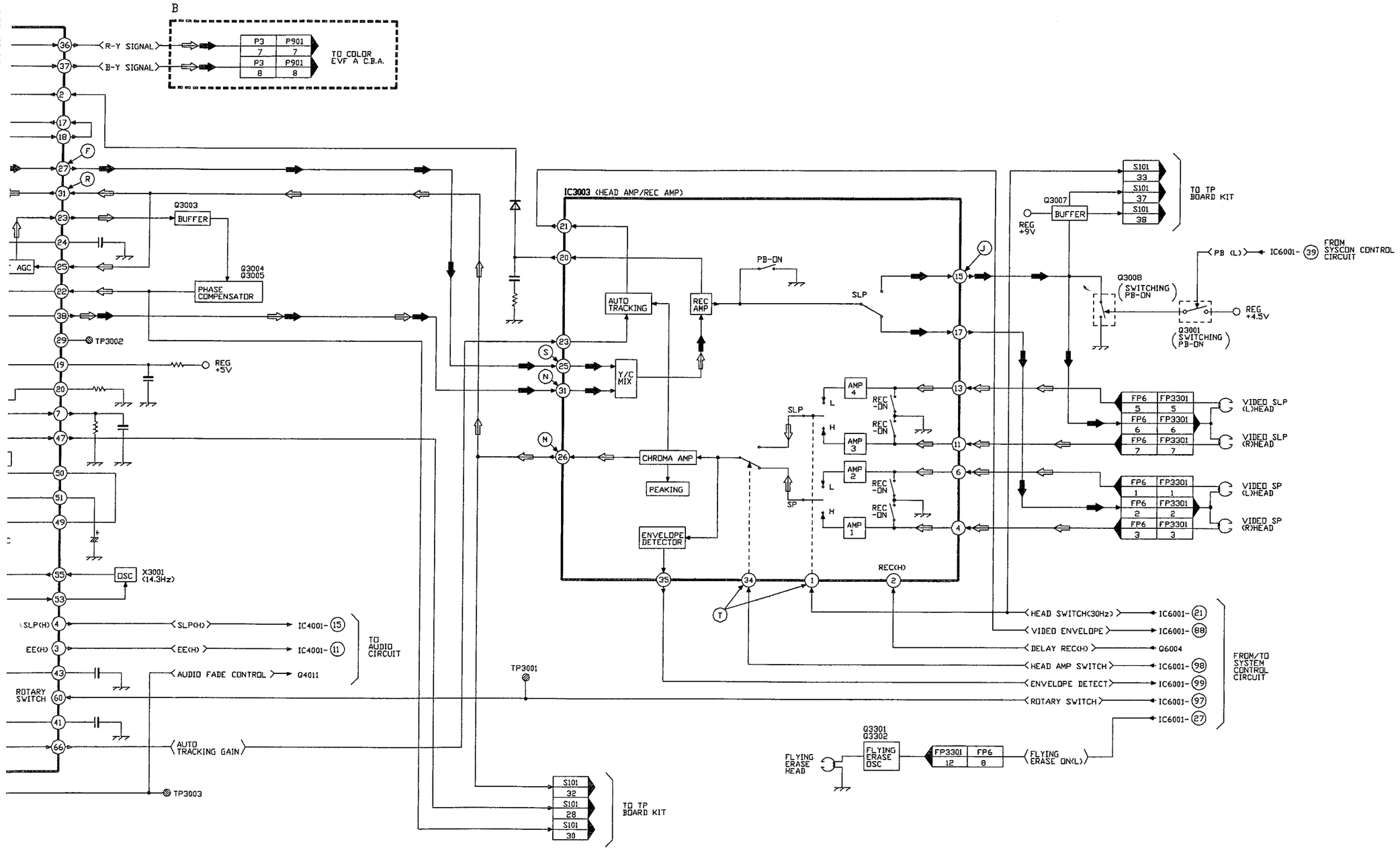
VIDEO BLOCK DIAGRAM

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-L657 PV-L757	A B

REC MODE
PB MODE




B
R-Y SIGNAL
B-Y SIGNAL
P3 7 P901 7
P3 8 P901 8
TO COLOR EVF A C.B.A.
IC3003 (HEAD AMP/REC AMP)
Q3003 BUFFER
Q3004 Q3005 PHASE COMPENSATOR
AGC
TP3002
REG +5V
X3001 (14.3Hz)
OSC
SLP(H)
EE(H)
IC4001- 15
IC4001- 11
TO AUDIO CIRCUIT
AUDIO FADE CONTROL
Q4011
ROTARY SWITCH
AUTO TRACKING GAIN
TP3003
AUTO TRACKING
REC AMP
PB-ON
SLP
Y/C MIX
CHROMA AMP
PEAKING
ENVELOPE DETECTOR
TP3001
S101 32
S101 28
S101 30
TO TP BOARD KIT
Q3007 BUFFER
REG +9V
S101 33
S101 37
S101 38
TO TP BOARD KIT
PB (L)
IC6001- 39
FROM SYSCON CONTROL CIRCUIT
Q3008 (SWITCHING PB-ON)
Q3001 (SWITCHING PB-ON)
REG +4.5V
AMP 4
AMP 3
AMP 2
AMP 1
REC-ON
FP6 5 FP3301 5
FP6 6 FP3301 6
FP6 7 FP3301 7
VIDEO SLP (L)HEAD
VIDEO SLP (R)HEAD
FP6 1 FP3301 1
FP6 2 FP3301 2
FP6 3 FP3301 3
VIDEO SP (L)HEAD
VIDEO SP (R)HEAD
REC(H)
HEAD SWITCH(30Hz)
VIDEO ENVELOPE
DELAY REC(H)
HEAD AMP SWITCH
ENVELOPE DETECT
ROTARY SWITCH
IC6001- 21
IC6001- 88
Q6004
IC6001- 98
IC6001- 99
IC6001- 97
IC6001- 27
FROM/TO SYSTEM CONTROL CIRCUIT
Q3301 Q3302 FLYING ERASE OSC
FLYING ERASE HEAD
FP3301 12 FP6 8
FLYING ERASE ON(L)

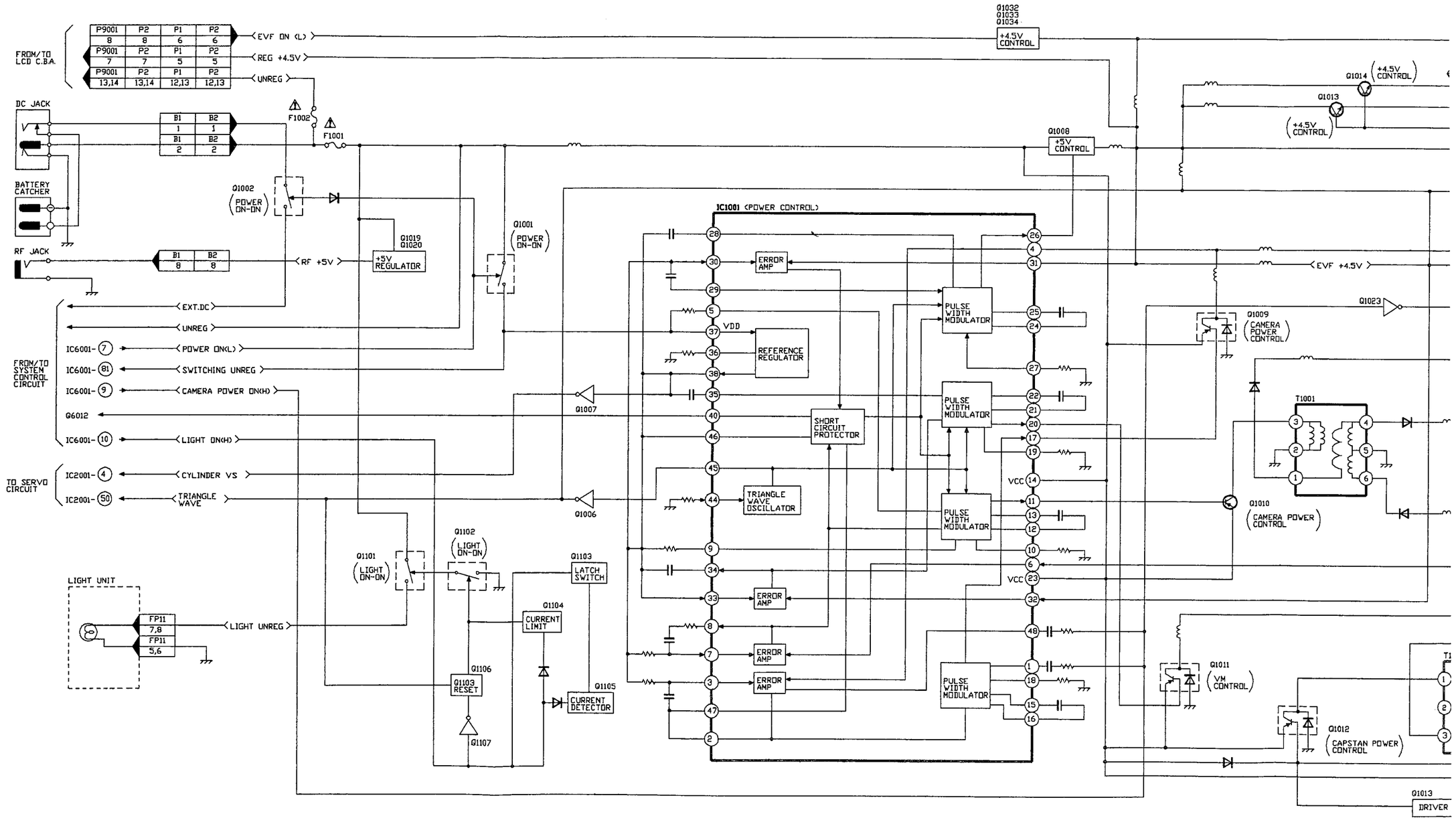
POWER SUPPLY BLOCK DIAGRAM

IMPORTANT SAFETY NOTICE:

COMPONENTS IDENTIFIED BY THE ⚠ SYMBOL HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-L657	A
PV-L757	B



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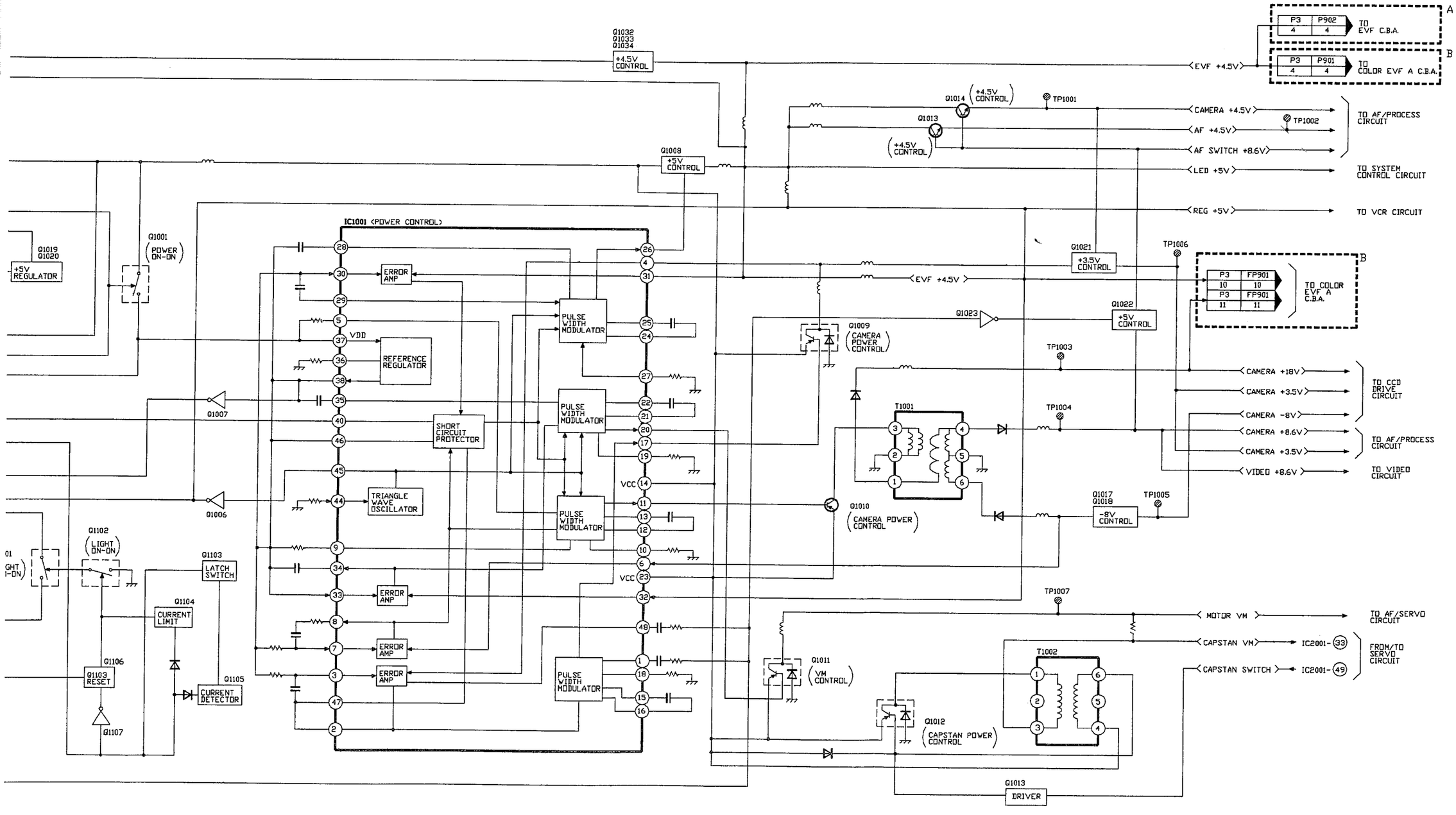
COMPONENTS IDENTIFIED BY THE ⚠ SYMBOL HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.



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